

over a large portion of the United States, for study in connection with the map of surface conditions. Observations of the air at a single station can have but little value compared with the international balloon work of Europe or the extended national kite work of the Weather Bureau.

In his recent address at Toronto, before the British Association for the Advancement of Science, Professor Moore said :

For twenty-seven years the forecasters of the Weather Bureau have studied the inception, development, and progression of these different classes of atmospheric disturbances. From a knowledge personally gained by many years service as an official forecaster, I do not hesitate to express the opinion that we have long since reached the highest degree of accuracy in the making of forecasts possible to be attained with surface readings. It is patent that we are extremely ignorant of the mechanics of the storm ; of the operations of those vast yet subtle forces in free air which give inception to the disturbance and which supply the energy necessary to continue the same. Long having realized this, I determined at once, on coming to the control of the United States Weather Bureau, to systematically attack the problem of upper-air exploration, with the hope ultimately of being able to construct a daily synoptic weather chart from simultaneous readings taken in free air at an altitude of not less than one mile above the earth. It appeared to me that all previous plans for investigating the upper air, by means of free and uncontrollable balloons, by observers in balloons, or by isolated kite stations or mountain observatories, were of little value in getting the information absolutely necessary to the improvement of our methods of forecasting. Simultaneous observations, at a uniform

high level, from many cooperating kite stations, was the fundamental feature of the plan that I inaugurated for the prosecution of this important investigation.

Professor Marvin was assigned to the difficult task of devising appliances and making instruments, and I am pleased to say that we have improved on kite flying to such an extent that apparatus is now easily sent up to a height of one mile in only a moderate wind. We have made an automatic instrument that, while weighing less than two pounds, will record temperature, pressure, humidity, and wind velocity. By January next we expect to have not less than twenty stations placed between the Rocky Mountains and the Atlantic Ocean taking daily readings at an elevation of one mile or more.

We shall then construct a chart from the high-level readings obtained at these twenty stations and study the same in connection with the surface chart made at the same moment. As we shall thus be able to map out not only, as now, the horizontal gradients for the lower surface conditions, but in addition the simultaneous gradients for the upper level, and what is of still more importance, shall be able to deduce from these, for any section of the atmosphere, the simultaneous vertical gradients of temperature, humidity, pressure, and wind velocity, we may confidently hope to better understand the development of storms and cold waves, and eventually improve the forecasts of their future course, extent, and rate of movement. * * * It will be a fascinating study to note the progress of cold waves at the upper and lower levels, and to determine whether the changes in temperature do not first begin above. * * * I am anxious to know the difference in temperature between the surface and the upper stratum in the four quadrants of the cyclone, and also of the anti-cyclone, especially when the storm or cold-wave conditions are intense. * * * The vertical distribution of temperature in the several quadrants may give a clue to the future direction of movement of the disturbance.

METEOROLOGICAL TABLES.

By A. J. HENRY, Chief of Division of Records and Meteorological Data.

Table I gives, for about 130 Weather Bureau stations making two observations daily and for about 20 others making only the 8 p. m. observation, the data ordinarily needed for climatological studies, viz, the monthly mean pressure, the monthly means and extremes of temperature, the average conditions as to moisture, cloudiness, movement of the wind, and the departures from normals in the case of pressure, temperature, and precipitation ; the altitudes of the instruments, the total depth of snowfall, and the mean wet-bulb temperatures are now given.

Table II gives, for about 2,400 stations occupied by voluntary observers, the extreme maximum and minimum temperatures, the mean temperature deduced from the average of all the daily maxima and minima, or other readings, as indicated by the numeral following the name of the station ; the total monthly precipitation, and the total depth in inches of any snow that may have fallen. When the spaces in the snow column are left blank it indicates that no snow has fallen, but when it is possible that there may have been snow of which no record has been made, that fact is indicated by leaders, thus (....).

Table III gives, for about 30 Canadian stations, the mean pressure, mean temperature, total precipitation, prevailing wind, total depth of snowfall, and the respective departures from normal values. Reports from Newfoundland and Bermuda are included in this table for convenience of tabulation.

Table IV gives detailed observations at Honolulu, Republic of Hawaii, by Curtis J. Lyons, meteorologist to the Government Survey.

Table V gives, for 26 stations, the mean hourly temperatures deduced from thermographs of the pattern described and figured in the Report of the Chief of the Weather Bureau, 1891-'92, p. 29.

Table VI gives, for 26 stations, the mean hourly pressures as automatically registered by Richard barographs, except for Washington, D. C., where Foreman's barograph is in use. Both instruments are described in the Report of the Chief of the Weather Bureau, 1891-'92, pp. 26 and 30.

Table VII gives, for about 130 stations, the arithmetical means of the hourly movements of the wind ending with the respective hours, as registered automatically by the Robinson anemometer, in conjunction with an electrical recording mechanism, described and illustrated in the Report of the Chief of the Weather Bureau, 1891-'92, p. 19.

Table VIII gives, for all stations that make observations at 8 a. m. and 8 p. m., the four component directions and the resultant directions based on these two observations only and without considering the velocity of the wind. The total movement for the whole month, as read from the dial of the Robinson anemometer, is given for each station in Table I. By adding the four components for the stations comprised in any geographical division one may obtain the average resultant direction for that division.

Table IX gives the total number of stations in each State from which meteorological reports of any kind have been received, and the number of such stations reporting thunderstorms (T) and auroras (A) on each day of the current month.

Table X gives, for 56 stations, the percentages of hourly sunshine as derived from the automatic records made by two essentially different types of instruments, designated, respectively, the thermometric recorder and the photographic recorder. The kind of instrument used at each station is indicated in the table by the letter T or P in the column following the name of the station.

Table XI gives a record of rains whose intensity at some period of the storm's continuance equaled or exceeded the following rates:

Duration, minutes..	5	10	15	20	25	30	35	40	45	50	60	80	100	120
Rates pr. hr. (ins.)..	3.00	1.80	1.40	1.20	1.08	1.00	0.94	0.90	0.86	0.84	0.75	0.60	0.54	0.50

In the northern part of the United States, especially in the colder months of the year, rains of the intensities shown in the above table seldom occur. In all cases where no storm of sufficient intensity to entitle it to a place in the full table has occurred, the greatest rainfall of any single storm has been given, also the greatest hourly fall during that storm.

Table XII gives the record of excessive precipitation at all stations from which reports are received.

NOTES EXPLANATORY OF THE CHARTS.

Chart I.—Tracks of centers of high pressure. The roman letters show number and order of centers of high areas. The figures within the circles show the days of the month; the letters *a* and *p* indicate, respectively, the 8 a. m. and 8 p. m., seventy-fifth meridian time, observations. The queries (?) on the tracks show that the centers could not be satisfactorily located. Within each circle is given the highest barometric reading reported near the center. A blank indicates that no reports were available. A wavy line indicates the axis of a ridge of high pressure.

Chart II.—Tracks of centers of low pressure. The roman letters show number and order of centers of low areas. The figures within the circles show the days of the month; the letters *a* and *p* indicate, respectively, the 8 a. m. and 8 p. m., seventy-fifth meridian time, observations. The queries (?) on the tracks show that the centers could not be satisfactorily

located. Within each circle is given the lowest barometric reading reported near the center. A blank indicates that no reports were available. A wavy line indicates the axis of a trough or long oval area of low pressure.

Chart III.—Total precipitation. The scale of shades showing the depth of rainfall is given on the chart itself. For isolated stations the rainfall is given in inches and tenths, when appreciable; otherwise, a "trace" is indicated by a capital T, and no rain at all, by 0.0.

Chart IV.—Sea-level isobars, surface isotherms, and resultant winds. The wind directions on this Chart are the computed resultants of observations at 8 a. m. and 8 p. m., daily; the resultant duration is shown by figures attached to each arrow. The temperatures are the means of daily maxima and minima and are not reduced to sea level. The pressures are the means of 8 a. m. and 8 p. m. observations, daily, and correspond to Professor Hazen's system of reduction; the barometer is not reduced to standard gravity, but the necessary reduction for 30 inches of the mercurial barometer is shown by the marginal figures for each degree of latitude.

Chart V.—Hydrographs for seven principal rivers of the United States.

TABLE I.—*Climatological data for Weather Bureau Stations, July, 1897.*

Stations.	Elevation of instruments.		Pressure, in inches.		Temperature of the air, in degrees Fahrenheit.								Precipitation, in inches.		Wind.		Maximum velocity.						
	Barometer above sea level.	Thermometers above ground.	Mean actual 8 a.m. and 8 p.m. + 8°.	Mean reduced.	Departure from normal.	Mean max. and min. + 2°.	Departure from normal.	Mean maximum.	Date.	Mean minimum.	Date.	Greatest daily range.	Mean wet thermometer.	Mean temperature of the dew point.	Mean relative humidity, per cent.	Total.	Departure from normal.	Days with 01, or more.	Total movement, miles.	Prevailing direction.	Miles per hour.	Date.	
	Aneroid + 0.1 above ground.																						
<i>New England.</i>																							
Eastport	76	69	74	29.92	30.01	+ .09	59.0	- 1.4	81	18	66	48	56	59	5.97	+ 2.6	13	6,479	s.	31	s.	14	
Portland, Me.	103	81	90	29.85	29.95	+ .03	66.1	- 1.9	83	5	73	54	60	62	2.62	- 1.1	10	5,154	s.	40	s.	14	
Northfield	872	15	59	29.05	29.96	+ .02	69.7	- 4.5	94	5	80	44	55	57	4.04	+ 4.9	15	4,038	s.	29	s.	6	
Boston	125	115	131	29.85	29.98	+ .04	71.6	- 0.2	94	10	74	56	57	59	4.23	+ 0.8	10	7,971	sw.	48	s.	14	
Nantucket	14	43	54	30.01	30.02	+ .01	68.7	- 0.9	83	10	79	57	57	61	4.23	+ 1.9	12	7,598	sw.	35	s.	14	
Woods Hole	51	57					68.2	- 0.0	73	16	72	54	51	53	5.80	+ 2.2	12	9,696	s.	52	se.	14	
Vineyard Haven	20			29.97	30.00	+ .03	68.8	- 0.0	73	16	74	55	56	58	5.28	- 1.9	12	10,568	sw.	42	e.	27	
Block Island	27	39	48	29.97	30.00	+ .03	71.0	- 0.8	83	10	79	55	56	58	5.08	+ 1.9	12	10,568	s.	43	s.	14	
Narragansett Pier	10																						
New Haven	107	118	140	29.86	29.97	- .00	72.3	+ 0.9	83	10	79	57	57	60	5.41	- 11.7	11	5,926	sw.	43	s.	14	
<i>Mid. Atlan. States.</i>																							
Albany	97	84	113	29.86	29.97	+ .04	74.7	+ 1.7	96	10	83	56	56	58	6.67	+ 2.7	16	4,553	s.	30	se.	21	
Binghamton	875	79	90				72.1	- 0.0	95	9	81	53	53	55	5.92	- 2.0	12	3,639	se.	27	sw.	11	
New York	314	93	93	29.65	29.98	- .00	72.8	- 1.0	93	10	79	50	50	52	5.52	+ 5.3	7	7,676	s.	54	w.	23	
Harrisburg	377	94	102	29.57	29.97	- .01	75.5	+ 2.6	93	6	84	59	59	61	3.68	- 0.6	11	4,680	w.	33	w.	11	
Philadelphia	117	168	168	29.85	29.97	- .02	76.4	+ 0.8	94	10	83	63	63	65	3.85	- 0.5	17	6,264	s.	23	s.	13	
Atlantic City	52	68	76	29.93	29.98	- .00	73.5	+ 0.3	87	31	77	62	62	63	8.01	+ 4.6	14	6,416	sw.	34	sw.	14	
Baltimore	123	85	82	29.85	29.98	- .02	70.9	- 1.7	94	25	73	53	53	55	6.95	+ 2.2	14	8,551	w.	29	e.	17	
Washington	112	69	76	29.86	29.97	- .03	70.9	- 0.7	93	16	71	56	56	58	5.78	+ 1.2	16	4,042	s.	34	n.	7	
Cape Henry	5	34					78.3	+ 0.7	96	23	85	67	67	69	5.68	0.0	11		se.	18	w.	11	
Lynchburg	685	83	88	29.27	29.99	- .01	70.6	- 1.9	92	3	87	61	61	63	6.75	+ 2.8	12	2,421	nw.	18	w.	12	
Norfolk	57	83	93	29.94	30.00	- .01	73.2	+ 0.1	92	3	87	53	53	55	4.42	+ 1.5	14	5,038	se.	38	nw.	11	
<i>S. Atlantic States.</i>																							
Charlotte	773	67	76	29.20	29.99	- .04	74.5	- 1.4	98	3	88	61	61	69	5.05	+ 0.5	15	3,268	se.	24	se.	19	
Hatteras	11	17	36	30.00	30.91	- .02	78.9	+ 1.0	93	22	83	63	63	68	8.98	+ 2.6	13	6,888	s.	45	sw.	13	
Kittyhawk	9	12	30	29.98	30.97	- .03	77.0	- 1.6	92	25	83	63	63	68	9.06	+ 3.2	7	7,200	sw.	48	sw.	15	
Raleigh	375	93	101	29.62	30.00	- .04	78.8	+ 0.5	96	31	85	62	62	68	4.90	- 0.3	17	8,345	sw.	32	nw.	1	
Wilmington	73	82	88	29.93	30.01	- .02	80.1	0.0	97	1	88	68	68	73	4.50	- 2.7	12	4,700	a.	30	s.	8	
Charleston	48	60	72	30.00	30.05	+ .01	81.6	- 0.7	99	1	87	70	70	73	6.10	+ 0.8	8	3,592	s.	32	nw.	21	
Columbia	5						81.0	- 0.3	92	21	83	63	63	68	9.66	+ 1.8	16	6,285	sw.	25	s.	23	
Augusta	180	89	103	29.82	30.00	- .01	81.6	- 0.6	101	3	92	62	62	68	6.10	+ 4.1	14		se.	12	5	5.0	...
Savannah	93	68	88	29.94	30.03	- .03	82.0	- 0.8	92	0	83	63	63	68	5.81	+ 0.1	16	5,424	e.	37	nw.	8	
Jacksonville	43	69	84	29.98	30.03	- .03	83.3	- 0.3	91	1	91	68	68	73	3.67	- 2.8	18	5,283	sw.	34	sw.	12	
<i>Florida Peninsula.</i>																							
Jupiter	28	18	30	30.02	30.05	- .05	80.6	- 1.7	91	12	86	69	69	74	5.37	+ 0.8	14	5,478	s.	29	sw.	11	
Key West	22	43	50	30.04	30.06	- .00	82.6	- 1.8	92	4	87	70	70	75	3.98	+ 0.1	16	5,434	e.	37	se.	8	
Tampa	36	60	68	30.01	30.05	- .01	81.6	- 0.5	97	1	88	68	68	73	6.23	+ 3.6	15	4,088		26		4.8	
<i>East Gulf States.</i>																							
Atlanta	1,131	93	126	28.87	30.03	- .04	78.4	- 0.0	97	1	88	59	59	64	4.04	+ 1.9	12	5,479	nw.	28	ne.	16	
Pensacola	66	73	90	29.97	30.03	- .03	82.7	- 1.0	92	0	87	64	64	73	2.19	+ 4.5	15	6,023	sw.	26	sw.	6	
Mobile	57	86	96	29.98	30.04	- .00	82.0	- 0.3	96	31	90	65	65	74	7.75	+ 1.2	11	4,883	nw.	37	sw.	18	
Montgomery	221	100	107	29.77	30.00	- .04	83.0	- 0.8	93	1	93	63	63	68	1.40	+ 3.1	9	4,073	s.	32	sw.	20	
Vicksburg	254	65	73	29.73	29.99	- .06	82.4	- 0.5	96	1	92	64	64	69	5.31	+ 0.8	8	4,399	sw.	36	nw.	19	
New Orleans	54	112	120	29.97	30.03	- .00	82.6	- 1.0	95	31	91	71	71	76	4.70	+ 1.8	15	4,942	sw.	26	n.	11	
Port Eads	27						84.2	- 1.9	93	6	90	74	74	78	2.92	+ 6.1	4		sw.			4
<i>West Gulf States.</i>																							
Shreveport	249	77	84	29.72	29.98	- .04	84.8	- 1.1	91	101	86	96	96	104	4.45	+ 0.3	12	5,479	nw.	28	ne.	16	
Fort Smith	481	63	73	29.45	29.91	- .04	85.0	- 1.5	91	102	86	94	94	104	3.26	+ 1.2	8	4,870	e.	36	sw.	6	
Little Rock	303	71	79	29.67	29.98	- .03	83.8	- 2.4	100	6	94	68	68	73	1.03	- 8.0	0	4,909	s.	27	sw.	11	
Corpus Christi	20	42	50	29.57	29.99	- .03	82.6	- 0.3	96	36	14	88	88	14	0.00	- 1.3	0	9,273	se.	32	se.	17	
Galveston	42	45	56	29.99	30.03	- .00	84.2	- 0.4	94	12	95	80	80	85	0.78	- 2.3	8	7,085	s.	36	sw.	27	
Palestine	510	54	61	29.46	29.99	- .04	84.4	- 1.8	102	26	95	87	87	92	1.01	- 1.5	3	4,568	s.	36	sw.	12	
San Antonio	704	95	104	29.24	29.96	- .04	84.0	- 1.5	103	26	95	88	88	93	0.29	+ 1.9	1	6,396	se.	34	se.	3	
<i>Ohio Val. & Tenn.</i>							77.9	- 0.6	98	1	88	58	58	63	5.30	+ 1.3	1		se.	32	s.	16	
Chattanooga	762	106	112	29.24	30.03	- .01	78.6	- 0.1	98	4	86	56	56	64	4.48	- 0.6	13	4,978	sw.	32	s.	16	
Knoxville	1,004	88	98	28.99	30.05	- .03	78.6	- 0.2	98	4	86	56	56	64	3.88	- 0.5	13	5,646	sw.	34	sw.	21	
Memphis	899	140	154	29.57	29.98	- .04	82.1	- 0.9	97	10	90	62	62	74	2.42	- 1.1	6	5,484	sw.	32	sw.	15	
Nashville	545	124	134	29.48	29.99	- .01	79.4	- 0.1	100	4	85	54	54	63	5.83	+ 4.2	14	6,086	n.	34	sw.	6	
Lexington	260	75	123	28.94	29.96	- .05	75.7	- 0.0	90	4	85	54											

TABLE I.—Climatological data for Weather Bureau Stations, July, 1897—Continued.

Stations.	Elevation of instruments		Pressure, in inches.		Temperature of the air, in degrees Fahrenheit.										Precipitation, in inches.		Wind.		Maximum velocity.		Cloudy days.	Average cloudiness, tenths.	Total snowfall.		
	Barometer above sea level, feet.	Thermometers above ground.	Mean actual 8 a.m. and 8 p.m. + 2.	Mean reduced.	Departure from normal.	Mean max. and min. + 2.	Departure from normal.	Maximum.	Mean maximum.	Minimum.	Date.	Mean minimum.	Greatest daily range.	Mean wet thermometer.	Mean temperature of the dew-point.	Mean relative humidity, per cent.	Total.	Departure from normal, or more.	Total movement, miles.	Miles per hour.	Date.				
<i>Up. Miss. Val.—Con.</i>																									
Springfield, Ill.	644	89	92	29.28	29.94	— .06	77.5	+ 0.3	96	97	* 9	87	55	18	68	24	4.16	+ 1.4	9	5,681	s.	30	n.w.		
Hannibal	584	75	107	29.37	29.96	— .08	80.6	+ 1.1	97	89	03	13	69	26	70	66	8.04	+ 4.9	10	5,398	s.	36	s.w.		
St. Louis.	567	111	210	29.37	29.96	— .08	77.5	+ 1.5	100	31	90	51	18	71	29	70	68	3.23	+ 0.5	9	6,141	s.	28	n.	
<i>Missouri Valley.</i>																	3.20	+ 0.8	5	5,220	s.	24	17		
Columbia	4	84															4.28	+ 0.6	8	4,790	s.e.	28	w.		
Kansas City	968	78	95	28.95	29.93	— .04	80.4	+ 1.9	102	30	90	60	13	71	29	70	66	4.29	+ 0.1	7	5,668	s.	34	s.e.	
Springfield, Mo.	1,324	100	103	28.60	29.95	— .03	78.2	+ 0.2	95	* 87	56	13	68	23	28	66	2.48	+ 2.3	6	6,278	s.	34	n.w.		
Topeka	81																3.89	+ 1.8	5	5,220	s.	21	8		
Lincoln	1,199	74	84	28.65	29.97	— .07	78.2	+ 1.4	100	31	90	53	15	62	55	29	70	66	4.29	+ 0.1	7	5,668	s.	34	s.e.
Omaha	1,108	92	97	28.75	29.98	— .09	78.8	+ 1.7	103	31	89	57	13	68	23	28	66	2.01	+ 2.7	9	5,761	s.e.	43	s.w.	
Sioux City	1,189	90	109	28.95	29.98	— .08	76.2	+ 1.6	103	31	88	50	13	64	23	28	64	2.26	+ 1.0	6	5,958	s.	57	w.	
Pierre	1,460	50	61	28.33	29.93	— .08	76.5	+ 0.5	99	13	88	53	5	63	36	24	64	2.54	+ 0.8	6	6,473	s.	44	w.	
Huron	1,306	68	72	28.50	29.96	— .08	73.2	+ 1.0	100	7	86	47	52	12	60	42	64	60	2.32	+ 0.8	10	8,951	s.e.	45	s.e.
Yankton	1,284	51	57	28.60	29.96	— .07	75	+ 1.0	100	31	88	53	12	63	36	24	64	2.14	+ 0.3	10	6,279	s.	41	s.	
<i>Northern Slope.</i>																	1.54	+ 0.1	1	5,220	s.	21	8		
Havre	2,494	15	38	27.28	29.82	— .06	65.7	+ 2.2	96	12	79	46	27	52	45	54	45	54	0.78	+ 1.4	6	7,225	w.	48	se.
Miles City	9,372	41	49	27.40	29.91	— .03	72.5	+ 1.2	100	28	87	45	24	44	53	41	52	45	0.59	+ 0.8	8	5,171	n.w.	51	w.
Helena	4,108	88	93	25.86	29.96	+ .05	63.6	+ 2.9	95	27	75	42	51	49	52	42	51	41	1.89	+ 0.8	11	5,909	s.w.	48	s.w.
Rapid City	3,351	53	61	26.60	29.94	— .07	71.0	+ 0.3	99	28	84	50	10	50	39	57	46	0.71	+ 1.0	7	5,961	s.	38	s.w.	
Cheyenne	6,105	58	60	24.10	29.89	— .00	63.0	+ 3.4	92	29	80	40	* 48	50	44	51	38	3.77	+ 2.0	11	6,534	n.w.	32	15	
Lander	5,372	28	36	24.70	29.93	+ .01	63.1	+ 4.3	91	28	81	51	41	37	44	61	58	0.85	+ 0.9	10	6,588	n.w.	48	n.w.	
North Platte	3,826	43	52	27.05	29.98	— .05	74.5	+ 0.5	103	29	88	51	4	61	42	63	58	1.90	+ 0.2	9	5,220	s.	14	15	
<i>Middle Slope.</i>																	2.59	+ 0.1	2	5,674	s.	48	w.		
Denver	5,290	88	151	24.81	29.93	+ .05	69.8	+ 3.0	96	7	84	43	20	56	39	54	42	4.06	+ 1.4	9	6,724	s.	40	27	
Pueblo	4,718	74	81	25.38	29.90	+ .01	73.0	+ 1.5	101	18	89	44	20	57	45	56	40	1.45	+ 0.7	8	5,326	n.w.	28	16	
Concordia	1,398	42	47	28.48	29.98	— .07	79.7	+ 2.6	102	31	92	56	13	67	34	61	51	5.81	+ 2.2	6	5,271	s.	30	s.e.	
Dodge City	2,504	44	52	27.37	29.88	— .03	78.8	+ 0.8	100	29	92	53	11	65	35	65	58	3.91	+ 0.8	6	9,091	s.	41	s.e.	
Wichita	1,351	78	82	28.53	29.91	— .03	81.2	+ 1.7	103	30	94	55	13	69	33	61	51	3.22	+ 0.6	6	6,112	s.	32	n.s.	
Oklahoma	1,218	54	53	28.70	29.94	— .01	80.8	+ 1.1	103	14	91	57	12	70	37	70	65	1.49	+ 1.6	1	7,519	s.	40	s.w.	
<i>Southern Slope.</i>																	2.08	+ 0.2	5	6,724	s.e.	40	ne.		
Abilene	1,749	47	54	28.18	29.93	— .08	88.9	+ 0.5	105	26	96	61	12	73	31	69	61	5.58	+ 0.0	9	11,098	s.	53	w.	
Amarillo	3,691	58	61	26.30	29.94	— .01	76.4	+ 0.4	97	14	88	55	20	65	31	68	55	1.58	+ 0.1	2	5,220	s.e.	20	16	
<i>Southern Plateau.</i>																	2.16	+ 0.2	2	6,724	s.e.	40	ne.		
El Paso	3,767	10	110	26.21	29.90	+ .03	80.0	+ 3.7	90	14	91	57	14	68	42	68	53	2.89	+ 0.8	7	7,282	ne.	60	s.w.	
Santa Fe	6,928	47	57	23.40	29.96	+ .02	87.0	+ 3.2	85	8	78	43	25	50	35	53	42	4.85	+ 0.1	8	4,888	s.e.	33	ne.	
Phoenix	1,076	47	57	28.68	29.76	— .04	89.6	+ 0.1	107	30	108	67	25	75	36	67	53	0.59	+ 0.3	8	3,669	e.	33	se.	
Yuma	189	16	50	29.63	29.76	— .04	91.1	+ 0.4	112	10	105	69	2	77	33	70	59	4.56	+ 0.1	0	5,071	s.w.	35	se.	
<i>Middle Plateau.</i>																	0.56	+ 0.1	1	5,220	s.	33	s.e.		
Carson City	4,720	88	92	25.30	29.93	— .08	66.8	+ 0.9	91	12	82	39	8	52	48	50	33	0.91	+ 0.1	3	5,126	w.	32	ne.	
Winnebago	4,340	59	70	25.69	29.93	+ .08	68.1	+ 2.8	92	12	84	35	8	52	48	51	39	0.08	+ 0.1	1	5,220	s.w.	36	w.	
Salt Lake City	4,344	83	90	25.66	29.93	+ .05	71.9	+ 3.6	98	28	85	49	4	59	37	58	46	4.09	+ 0.2	5	4,637	s.e.	33	s.	
<i>Northern Plateau.</i>																	0.56	+ 0.0	2	5,220	s.	7	16		
Baker City	3,470	49	47	26.48	29.99	+ .05	62.3	+ 4.4	98	11	76	37	7	48	41	49	37	0.24	+ 0.4	2	4,376	s.	20	n.	
Idaho Falls	4,742	10	56	25.27	29.93	+ .04	66.0	+ 1.6	96	12	83	34	19	49	50	51	36	0.20	+ 0.2	4	8,894	s.w.	27	16	
Spokane	1,948	99	107	27.95	29.95	+ .08	62.6	+ 3.8	97	11	77	46	7	53	38	53	48	0.98	+ 0.3	9	5,200	n.w.	16	13	
Walla Walla	1,018	65	73	28.98	29.98	+ .04	70.6	+ 4.6	105	11	84	50	7	58	43	56	45	0.84	+ 0.5	4	5,048	s.	25	s.w.	
Fort Canby	179	10	34	29.92	30.11	+ .06	57.8	+ 0.8	69	18	82	49	49	*	53	15	55	53	0.88	+ 0.1	1	7,076	d.	57	s.
Port Angeles	29	47	61				55.1	+ 1.5	67	9	61	44	26	49	20	20	20	0.88	+ 0.5	8	5,904	w.	34	w.	
Pysht &	5						59.3		70	10	68	48	*	50	30	30	30	0.90	+ 0.1	6	5,220	w.	22	4	
Seattle	119	100	108	29.95	30.08	— .03	62.6	+ 3.6	83	10	72	50	18	54	30	55	50	2.36	+ 0.0	9	5,291	s.	28	s.w.	
Tacoma	213						61.4		87	10	70	47	25	52	33	34	0.87	+ 0.0	7	4,797	s.w.	22	s.w.		
Tatoosh Island	86	12	21	30.03	30.13	+ .06	65.0	+ 1.2	62	13	59	48	25	51	11	54	52	3.11	+ 1.0	12	6,021	s.	32	s.	
Astoria	39	60	60				60.0	+ 1.5	74	10	66	47	29	54	20	52	58	1.66	+ 0.6	9	5,220	n.w.	20	7	
Portland, Oreg.	153	203	213	20.92	30.08	+ .05	64.6</td																		

TABLE II.—*Meteorological record of voluntary and other cooperating observers, July, 1897.*

Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.	
	Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.
<i>Alabama.</i>						<i>Arizona—Cont'd.</i>						<i>California—Cont'd.</i>					
Alco ^t	100	57	81.7	6.28	Ins.	Tombstone	95	62	77.8	3.24	Ins.	Descanso ^{*5}	93	38	67.0	0.62	Ins.
Ashville ^t	104	54	81.3	5.17		Tuba	103	43	75.4	0.19		Drytown	112	45	76.8	0.00	
Bermuda ^t	98	58	81.2	4.80		Tucson ^{c†}	103	65	87.3	1.98		Dunnington ^{*8}	106	64	82.2	0.00	
Birmingham	99	59	82.0	6.16		Walnut Grove				1.04		Durham ^{*1}	101	53	76.6	0.00	
Brentont	98	66	81.6	7.85		Walnut Ranch ^{*1†}	98	57	72.8	4.49		East Brother L. H.					
Bridgeport ^t				8.04		Whipple Barracks ^t	97	46	72.2	2.48		Edmonton ^{*1}	89	42	62.6	0.00	
Citronelle ^t	95	66	82.5	9.07		Willcox ^{*8}	97	70	81.7	1.55		Elsinore	108	53	73.6	0.00	
Clanton ^t	95	58	80.8	0.56		Williams	92	40	68.0	1.50		Escondido	101	47	73.4	0.00	
Daphne ^t	98	61	82.8	3.88								Fallbrook ^{*1}	96	54	69.4	0.01	
Decatur ^t	105	64	79.7	3.67								Folsom City ^{b†}	107	62	81.0	0.00	
Demopolis				5.73								Fordyce Dam					
Eiba ^t	95	57	80.6									Fort Bragg ^t					
Eufaula ^t	101	56	81.9	3.73								Fort Ross	75	45	57.8	0.00	
Evergreen ^t	96	65	82.0	5.38								Georgetown	96	49	73.2	0.00	
Florence ^t				3.91								Goshen ^{*6}	109	60	84.7	0.00	
Florence ^t	103	56	81.4	3.18								Grand Island ^{*5}	106	54	79.8	0.00	
Fort Deposit ^t	101	61	88.9	1.47								Grass Valley					
Gadsden	103	55	82.8	8.64								Greenville ^t	94	31	63.2	T.	
Goodwater ^t	102	58	81.5	4.16								Headsburg ^{*1}	87	48	72.4	0.00	
Greensboro ^t	98	60	81.2	6.01								Hollister	96	40	65.3	0.00	
Hamilton	100	52	80.0	2.94								Hydesville	77	40	57.8	0.00	
Healing Springs ^t	99	57	80.4	9.04								Indio ^{*8}	115	75	88.7	0.00	
Highland Home ^t	97	66	82.2	2.81								Jackson	98	42	73.6	0.00	
Lock No. 4.	101	57	80.7	4.51								Jolon					
Madison Station ^t	103	54	77.7	7.05								Keeler ^{*8}	110	70	85.2	0.00	
Maple Grove	103	50	76.0	8.77								Keene ^{*8}	101	60	78.7	0.00	
Marion ^t	99	64	89.7	3.25								Kennedy Gold Mine	105	47	77.8	0.00	
Mount Willing ^t	100	52	82.2	0.88								Kernville					
Newbern ^t	97	65	82.3	4.38								King City ^{*8}	105	50	68.9	0.00	
Newburg	103 ^d	50 ^d	81.6 ^d	3.55								Kingsburg ^{*1}	107	65	85.7	0.00	
Newton ^t	100	59	80.8	10.49								Kono Tayee	95	54	75.2	0.00	
Opelika ^t	100	53	82.5	6.38								Lagrange ^{*5}	110	55	83.6	0.00	
Oxana ^t	98	55	77.7	7.16								Laporte ^{*1†}	86	43	68.8	0.00	
Pineapple	101	57	82.5	3.48								Lemore ^{a*8}	109	59	84.4	0.00	
Pushmataha ^t	101	60	82.4	4.06								Lick Observatory	89	55	70.8	0.00	
Riverton ^t				2.18								Lime Kiln	111	53	88.0		
Rockmills ^t	96	55	77.8	6.57								Lime Point L. H.					
Scottsboro ^t	105	54	79.8	3.81								Lodi	103	50	75.8	0.00	
Selma ^t	102	62	82.7	5.52								Los Gatos ^b	98	44	68.2	0.00	
Talladega ^{*1}	95	60	79.4	3.79								Lytton Springs	102	50	72.5	T.	
Tallassee				4.53								McMullin ^{*1}	106	53	85.1	0.00	
Tuscaloosa ^t	102	64	82.6	6.81								Malakoff Mine ^{*1}	93	54	72.2	0.00	
Tuscumbia	108	58	82.1	3.86								Mammoth Tank ^{*8}	115	81	89.4	0.00	
Union ^t	104	61	81.9	7.00								Manzana	105	50	77.8	T.	
Union Springs ^t	98	61	82.0	5.19								Mare Island L. H.					
Uniontown ^t	97	64	82.3	2.60								Merced ^{*8}	109	56	84.0	0.00	
Valleyhead	98	53	76.8	3.61								Mills College					
Warrior				6.21								Milton (near) ^{*1}	104	63	77.3	0.00	
Wetumpka	100	59	88.4	2.04								Modesto ^{*8}	108	63	85.1	0.00	
Wilsonville ^t				3.14								Mohave ^{*8}	113	63	86.6	0.00	
<i>Alaska.</i>												Mokelumne Hill ^{*3}					
Killian ^c	66	42	52.2	5.30								Monterey ^{*8}	73	50	59.7	0.00	
<i>Arizona.</i>												Mount Breckenridge					
Antelope Valley												Mount Frazier					
Bisbee ^t	92	57	75.4	7.86								Napa b.	102	46	67.0	0.00	
Bucketeye ^t	108	64	67.0	0.08								Needles	113	70	94.8	0.00	
Calabasas	98	55	79.4	2.61								Newcastle ^{a†}	104	51	78.2	0.00	
Casa Grande ^{*8}	115	75	98.8	0.00								Newhall ^{*8}	109	60	76.5	0.00	
Cedar Springs												Nordhoff					
Congress	102	55	88.3	1.29								North Ontario	95	52	73.0	0.00	
Dragoon												North San Juan ^{*1}	99	56	72.8	0.00	
Dragoon Summit ^{*8}	99	70	88.3	1.23								Oakland ^a	84	50	63.0	T.	
Dudleville	103	60	82.0	1.03								Ogilby ^{*8}	118	90	99.9	0.00	
Farley's Camp ^t	109	68	89.5	0.70								Oleta ^{*1}	100	54	74.2	T.	
Flagstaff ^t	88	64	72.0	0.05								Orangevale ^t	110	50	81.2	0.00	
Fort Apache	97	49	74.0	1.20								Orland ^{*8}	109	65	87.4	0.00	
Fort Defiance	90	58	68.8	1.42								Palermo ^t	112	45	78.4	0.00	
Fort Grant ^t	95	59	77.0	2.05								Paso Robles ^b	101	46	71.0	0.00	
Fort Huachuca ^t	94	57	75.4	3.05								Peachland					
Gilabend ^{a*8}	109	81	97.0	0.20								Piedras Blancas L. H.					
Giseala ^t	108	41	82.3	T.								Pigeon Point L. H.					
Glendale	107	68	87.8	0.23								Pilot Creek					
Holbrook ^t	96	44	73.8	0.77								Placerville	102	45	74.6	0.00	
Lochiel ^{*1}	90 ^c	63 ^c	74.5 ^c	4.57								Point Ano Nuevo L. H.					
Maricopa ^{*8}	114	78	88.9	0.50								Point Arena L. H.					
Mesa ^t	110	68	90.4	0.33								Point Bonita L. H.					
Mount Huachuca	98	58	75.4	4.33								Point Conception L. H.					
Music Mountain	110	55	86.6	0.08								Point Fermin L. H.					
Natural Bridge												Point George L. H.					
Oracle ^t	98	63	80.7	0.55								Point Hueneme L. H.					
Oro												Point Lohos	68	48	55.8	0.00	
Oro Blanco	100	61	80.6	1.90								Point Loma L. H.					
Pantano ^{*8}	100	67	82.0	2.09								Point Montara L. H.					
Payson												Point Pinole L. H.					
Peoria ^t	107	62	88.8	0.49								Point Reyes L. H.					
Phoenix	106	62	86.8	0.44								Point Sur L. H.					
Pinal Ranch												Pomona (near)	97	50	72.8	0.00	
Reymert ^t	112	67	91.4	0.01								Poway ^{*8}	92	62	67.0	0.00	

TABLE II.—*Meteorological record of voluntary and other cooperating observers—Continued.*

Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.	
	Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.
<i>California—Cont'd.</i>						<i>Colorado—Cont'd.</i>						<i>Georgia—Cont'd.</i>					
Sacramento a	103	52	75.0	0.00	Ins.	Pagoda†	92	29	61.4	2.51	T.	Athens†	100	58	78.6	3.19	Ins.
Salinas ^{**}	92	50	65.8	0.00		Paonia†	1.05		Bainbridge†	102	62	83.2	7.74	
San Bernardino†	102	48	74.8	T.	Parachute†	94	33	67.0	0.80		Belleville	104	63	82.4	7.53		
San Jose ^b	92	43	65.6	0.00	Pinkhamton [†]	86	37	62.9	2.41		Blakely†	99	67	82.6	4.11		
San Leandro [†]	90	56	62.8	0.00	Rangely†	101	34	70.1	0.82		Brag	102	56	80.4	4.84		
San Luis L. H.	.....	.....	.....	0.00	Redcliff	86	27	56.4	2.41		Camak†	101	62	81.6	3.42	
San Mateo ^{**}	90	58	70.5	0.00	Rico†	.....	.....	.....	2.68	T.	Canton†	98	57	77.8	5.85	
San Miguel ^{**}	105	52	76.3	0.00	Ruby	84	36	68.2	0.45		Cartersville ^a	100	55	78.5	7.84		
Santa Barbara a	81	51	65.8	0.00	Saguache†	.....	.....	.....	1.31		Cedartown	95	52	75.4	9.07	
Santa Barbara L. H.	.....	.....	.....	0.00	St. Cloud	98	35	63.1	1.71		Clayton†	100	60	82.1	4.97	
Santa Clara a	.....	.....	.....	0.00	San Luis†	98	36	62.0	1.13		Columbus	100	64	84.7		
Santa Cruz [†]	89	41	61.8	0.00	Seibertt	.....	.....	.....	2.53		Cordele	99	57	76.2	3.52	
Santa Cruz L. H.	.....	.....	.....	0.00	Sherwood Ranch	81 ¹	33 ¹	56.0 ¹	.....		Covington	102	57	76.3	3.52	
Santa Maria	87	47	66.5	0.03	Smoky Hill Mine	87	33	60.0	3.65		Crescent	104	66	83.0	6.80		
Santa Monica ^{**}	84	53	71.9	0.00	Springfield	.....	.....	.....	1.99		Dahlonega†	95	54	75.0	8.27	
San Paula b	86	46	65.1	0.00	Stamford [†]	82	24	50.8	2.28		Diamond	94	46	74.0	5.92		
Santa Rosa ^{**}	96	49	70.6	0.00	Steamboat Springs	99	32	61.4	0.90		Eastman†	101	59	81.4	7.90		
Saticoy	.....	.....	.....	T.	Surface Creek†	93	36	67.2	0.82		Elberton†	100	59	80.0	5.33	
Shasta	.....	.....	.....	0.00	Thon†	100	36	68.1	1.91		Fleming†	103	57	80.8	5.87	
Sierra Madre	94	51	71.0	0.08	T. S. Ranch†	92	44	70.0	1.73		Fort Gaines	98	60	81.3	10.08		
S. E. Farallone L. H.	.....	.....	.....	0.00	Twin Lakes	.....	.....	.....	1.00		Franklin	96	60	80.2	5.04	
Stanford University	98	46	67.2	0.00	Vilas	.....	.....	.....	0.12		Gainesville	95	58	76.5	14.43	
Stockton a	101	52	75.2	0.00	Walden	85	21	59.6	0.98		Gilliland†	100	57	78.7	10.94		
Summerdale†	91	45	68.0	0.00	Wallet†	.....	.....	.....	2.68		Greensburg	100	58	78.8	7.73	
Susanville†	93	50	70.5	0.00	Wray†	105	48	74.6	1.79		Griffin†	108	57	80.6	6.11		
Sutter Creek [†]	100	42	70.5	0.00	Yuma	.....	.....	.....	1.78		Hephzibah [†]	100	70	80.2	6.15	
Tehama ^{**}	107	64	66.4	0.00	<i>Connecticut.</i>	.....	.....	.....	.....		Jesup	102 ¹	60 ¹	82.4 ¹	2.95	
Templeton ^{**}	104	50	71.7	0.00	Bridgeport	91	58	72.8	18.77		Lagrange†	98	60	81.0	7.86		
Trinidad L. H.	88	45	68.6	0.00	Canton†	89	54	69.4	16.98		Leverett	107	58	81.5	7.53		
Tulare b	.....	.....	.....	Colchester	88	55	70.8	10.88		Louisville	104	59	81.8	4.55		
Tulare c	112	50	81.0	0.00	Falls Village	92	57	73.2	18.35		Lumpkin	95	65	81.7	2.07		
Turlock†	112	43	79.4	0.00	Middletown	84	57	69.5	6.23		Macon [†]	102	65	81.8	5.10		
Ukiah†	100	48	71.4	T.	New London†	92	58	72.0	10.12		Marlett	97	58	76.9	8.41		
Upper Lake	102	47	73.6	0.03	Norwalk†	92	58	72.0	10.12		Marshallville†	97	67	82.1	8.20		
Upper Mattole [†]	90	51	66.1	0.00	Southington [†]	88	58	71.2	19.90		Milledgeville†	99	70	83.6	1.85		
Vacaville a [†]	108	57	78.5	0.00	Storrs	89	58	69.6	12.24		Millen	100	59	82.6	5.37		
Ventura†	85	42	62.2	0.00	Voluntown†	88	58	71.1	8.53		Monticello [†]	95	73	82.0	3.75		
Volcano Springs ^{**}	123	70	88.9	T.	Waterbury	90	56	71.7	18.10		Morgan†	100	55	81.2	2.61		
Walnut Creek	108	55	78.0	0.00	West Cornwall†	87	51	69.0	9.71		Newman†	103	60	81.5	5.29		
West Palmdale	.....	.....	.....	0.98	Windsor	91	57	72.4	15.29		Point Peter	100	58	79.7	4.37	
Westpoint†	.....	.....	.....	0.00	<i>Delaware.</i>	.....	.....	.....	.....		Poulan†	101	56	81.7	2.91	
Wheatland†	109	51	79.0	0.00	Milford	94	63	76.6	8.68		Quitman†	101	62	82.6	6.68		
Williams ^{**}	106	55	88.0	0.00	Millsboro	92	61	75.8	8.16		Ramsey	98	53	75.0	8.05		
Wilmington ^{**}	89	53	75.7	0.00	Newark	92	59	75.4	8.70		Rome†	101	57	78.8	7.68		
Wire Bridge ^{**}	105	58	80.7	0.00	<i>District of Columbia.</i>	.....	.....	.....	.....		Sparta	105	60	81.8	2.31	
Yerba Buena L. H.	.....	.....	.....	0.00	Distributing Reservoir [†]	91	69	78.3	5.77		Talbotton†	94 ¹	59	79.1 ¹	5.41	
Yreka†	99	38	68.0	0.00	Receiving Reservoir [†]	90	66	78.3	5.66		Tallapoosa	99	62	82.4	6.15		
Yuba City ^{**}	105	58	79.9	0.00	West Washington	93	59	77.0	5.88		Thomasville†	99	62	82.4	6.03		
<i>Colorado.</i>	.....	.....	.....	4.7	<i>Florida.</i>	.....	.....	.....	.....		Toccoa†	100	60	81.6	5.60	
Alma†	74	27	47.7	1.23	Amelia†	99	64	82.1	4.65		Union Point	98	60	81.6	5.60		
Antlers†	95	39	69.2	1.34	Archer†	99	63	84.0	7.95		Washington†	104	60	81.9	5.16		
Arkins	.....	.....	.....	4.24	Bartow	97	70	82.9	14.55		Waycross	102	63	84.6	8.45	
Boulder	90	48	70.6	3.00	Boca Raton†	91	69	81.2	7.58		Waynesboro	100	60	80.0	3.61		
Boxelder	.....	.....	.....	4.08	Brooksville†	94	70	81.6	11.98		Westpoint	102	61	82.4	5.37	
Breckenridge†	78	27	51.8	1.70	Carrabelle†	96	62	82.0	7.10	<i>Idaho.</i>	.....	.....	.....	.....
Canyon†	104	41	73.6	1.55	Clermont†	90	70	83.1	7.82		American Falls	108	89	89.6	0.48		
Castlerock	97	37	69.2	3.59	De Funik Springs	96	63	81.6	8.96		Blackfoot†	100	82	87.3	1.84		
Cheyenne Wells	108	48	74.0	4.19	Earnestville†	97	70	82.9	11.39		Boise Barracks†	107	40	70.6	0.16		
Collbran	.....	.....	.....	1.26	Emerson†	98	63	82.1	5.49		Burnside†	98	35	64.2	T.	
Colorado Springs†	91	40	66.4	8.34	Eustis†	95	69	82.2	6.21		Challis	100	84	64.4	0.52		
Cope	103	45	73.7	1.68	Federal Point†	96	63	80.8	7.05		Coeur d'Alene	99	41	65.2	0.51		
Crook	105 ⁴	43	72.4	1.54	Fort Meade†	93	64	79.6	11.81		Corral [†]	98	45	62.8	0.06		
Delta	104	38	72.0	0.90	Frostproof†	98	68	81.2	8.94		Downey	97	32	63.2	0.20		
Dumont†	85	36	61.2	2.55	Gainesville	101	60	83.1	7.18		Fort Sherman†	96	41	68.5	1.93		
Durango	90	36	65.9	1.38	Emerson†	98	63	83.1	5.49		Gimlet†	95	34	63.2	0.07		
Fleming	.....	.....	.....	1.25	Grasmere†	99	65	83.1	7.28		Idaho City	97	33	63.6	1.26	
Fort Collins†	95	39	66.8	2.65	Haywood	98	64	82.6	8.80		Junction†	92	35	57.2	0.36		
Fort Morgan	100 ¹	46 ¹	71.0 ¹	.....	Huntington	99	68	83.0	8.56		Kootenai†	98	38	64.8	1.47	
Fox	.....	.....	.....	1.59	Kissimmee	98	68	83.6	5.70		Lewiston†	106	44	69.4	0.88	
Garnett	86	29	60.5	0.90	Lake Butler†	98	67	83.8	3.23		Lost River†	.....	.....	.....	0.51 ¹	
Glen Eyrie†	86	36	64.2	3.35	Lake City†	96	66	83.2	2.69		Martin†	89	27	59.4	T.		
Grand Junction†	97	50	76.2	0.98	Maccleeny†	102	64	82.8	6.49		Marysville	98	29	61.6	1.80		
Greeley†	95	42	68.3	2.08	Manatee...	.....	.....	.....	11.74		Mindoka	108	30	66.7	0.10	
Grover	.....	.....	.....	2.00	Merritts Island	95	74	82.7	2.59		Murray†	92	36	58.6	3.43	
Hulch†	86	29	60.9	3.84	Mullet Key†	94	75	85.0	7.67		Nampa	107	30	66.3	0.23		
Gunnison	89	36	60.0	2.01	Myers†	92	70	80.4	14.83		Ola†	100	39	66.2	0.21		
Hoochne	94	40	70.2	2.05	New Smyrna	93	66	80.6	9.94		Payette†	104	40	71.5	0.70	</td	

TABLE II.—*Meteorological record of voluntary and other cooperating observers—Continued.*

Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		
	Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.	
<i>Illinois—Cont'd.</i>	o	o	o	Ins.	Ins.	<i>Indiana—Cont'd.</i>	o	o	o	Ins.	Ins.	<i>Iowa—Cont'd.</i>	o	o	o	Ins.	Ins.	
Carlyle	93	60	76.7	6.54		Greensburg	96	57	79.4	7.24		Independence†	96	49	72.2	2.42		
Carlton	98	53	77.3	1.96		Hammond†	99	44	76.4	0.74		Indianola†	98	50	76.4	2.39		
Charleston	96	54	77.4	1.96		Huntington	100	54	77.0	2.15		Iowa City†	100	53	76.9	3.83		
Chemung	96	49	72.8	4.73		Jasper†	99	55	78.0	3.40		Iowa City b	98	54	74.1	.....	
Chester	96	53	76.0	8.05		Jeffersonville	97	56	78.3	7.39		Iowa Falls†	100	45	74.2	2.11		
Cisne†	95	54	77.2	6.93		Knightstown†	99	52	76.7	8.09		Keosauqua	97	56	78.3	4.45		
Clearcreek†	101	49	76.7	2.92		Knox	99	54	77.7	2.50		Knoxville	98	53	77.0	3.05		
Coatsburg†	94	53	76.0	7.95		Kokomo†	104	53	77.3	1.03		Lansing	98	49	76.0	2.66		
Cobden†	99	52	78.7	2.99		Laconia	101	55	79.5	1.32		Larchwood	97	.....	.....	4.27		
Cordova	96	53	76.0	2.47		Lafayette†	99	51	76.3	2.79		Larrabee†	97	47	78.3	4.61		
Danville	101	51	77.8	3.13		Laporte	103	50	78.0	3.43		Leclaire	97	.....	.....	1.88		
Decatur†	101	53	77.3	3.03		Logansport b†	103	54	77.8	1.28		Lemars	99	46	75.8	2.09		
Dixon†	100	53	76.8	1.97		Madison†	98	55	78.1	4.78		Lenox†	97	61	76.2	4.06		
Dwight†	99	50	76.2	2.50		Marengo†	99	53	77.5	3.57		Logan†	105	47	76.4	1.38		
East Peoria†	101	50	77.6	4.71		Marion†	101	53	76.5	3.24		Malvern†	106	50	76.9	1.17		
Effingham†	98	55	78.0	2.11		Mauzy†	96	53	75.5	4.66		Maple Valley	97	.....	.....	4.30		
Evaston* ¹⁰	96	58	75.0	.....		Mount Vernon†	100	57	79.4	5.18		Maquoketa	98	53	76.4	2.12		
Fort Sheridan†	95	50	78.2	1.34		Northfield†	97	53	75.6	1.78		Marshall†	99	50	75.1	2.37		
Friendgrove*† ⁴	98	50	77.9	2.49		Princeton†	100	56	77.9	3.75		Mason City	98	45	70.6	4.01		
Galva†	98	52	76.4	3.60		Richmond	98	51	76.0	3.04		Millman	97	.....	.....	3.46		
Glenwood*† ¹	99	60	75.2	1.12		Rockville†	97	53	76.9	3.96		Moar	97	52	77.4	6.94		
Golconda†	103	55	80.6	3.84		Salem	103	53	77.0	4.09		Mountsyr†	101	53	77.3	2.25		
Grafton†	98	53	78.0	3.73		Scottsburg	90	56	78.4	4.87		Mount Pleasant*† ¹	92	60	76.8	4.60		
Greenville†	100	54	78.7	5.69		Seymour	99	55	77.4	6.85		Mount Vernon a* ¹	99	56	77.4	2.95		
Griggsville†	98	55	78.0	.....		Shelbyville	102	55	78.9	4.13		Mount Vernon b	99	51	75.1	5.86		
Halliday* ¹¹	100 ^a	55	84.4	2.33		South Bend†	101	53	76.3	1.75		Neola	103	47	78.2	3.05		
Havana†	97	53	77.4	5.23		Syracuse†	98	.....	.....	1.47		New Hampton	98	58	75.2	2.00		
Herrin* ¹	98	55	80.6	2.66		Terre Haute†	98	57	79.1	3.68		Newton†	99	50	76.3	2.17		
Hillsboro†	97	55	78.0	5.16		Tipton†	100	53	77.4	1.42		North McGregor	96	53	72.8	4.31		
Joliet†	103	55	77.4	1.59		Topeka†	97	54	75.2	1.05		Northwood	96	53	72.8	4.08		
Jordans Grove†	98	54	78.6	0.93		Valparaiso†	96	54	75.9	1.10		Odebolt	97	.....	.....	2.96		
Kankakee a†	98	55	73.7	2.15		Vincennes†	102	56	80.2	4.59		Ogden	99	47	75.3	2.13		
Kishwaukee	97	50	74.7	2.89		Warsaw†	98	53	76.2	2.21		Osgage*† ³	97	52	72.0	3.51		
Knoxville a†	97	53	76.3	4.45		Washington†	99	55	78.7	4.35		Oscoda	100	52	77.0	1.01		
Lagrange†	95	52	78.3	2.97		Tulsa†	98	53	77.2	1.96		Oskaloosa†	98	49	76.9	3.25		
Laharpe* ¹	98	54	78.6	3.87		Wagoner	109	59	83.8	3.22		Ottumwa	98	54	77.5	2.53		
Lanark*† ¹	98	50	72.5	1.06		<i>Indian Territory.</i>	.....	.....	.....	.....		Ovid†	100	47	77.6	1.57		
Lexington	100	53	76.4	6.38		Adair	.....	.....	.....	4.04		Plover	97	49	74.8	4.22		
Loami†	.....	.....	.....	4.41		Afton	105	52	77.8	1.89		Pringhar	97	49	74.0	2.96		
Louisville†	95	55	76.5	2.95		Algona* ¹	96	53	75.8	3.53		Red Oak	100	49	76.0	2.67		
McLeansboro†	99	50	78.6	3.48		Alta a†	96	50	74.5	5.19		Rock Rapids	100	48	72.6	2.67		
Martinsville†	96	55	77.0	2.30		Amana†	100	51	75.9	4.28		Rockwell City	101	43	76.8	2.27		
Martinson†	101	51	77.4	1.67		Ames b	100 ^a	51	77.5	2.45		Sac City†	97	48	74.1	3.40		
Mascoutah* ⁶	100	58	80.0	8.27		Ames (near)	.....	.....	.....	4.18		St. Charles	97	53	76.4	3.67		
Mattoon* ¹	95	55	78.1	3.63		Atlantic	102	44	73.8	2.39		Seymour†	100	50	78.0	2.25		
Minonk†	104	51	76.4	2.93		Atlantic (near)	99	53	76.8	3.25		Sibley	98	48	72.5	6.81		
Monmouth†	96	53	76.1	5.26		Audubon	99	49	73.4	3.53		Sidney	100	57	76.6	2.25		
Morgan Park	95	53	73.2	.....		Belknap	98	52	76.4	3.55		Sigourney	100	54	76.4	4.08		
Morrisonville†	95	53	76.1	8.60		Belleplaine	100	47	73.0	4.59		Spencer	98	47	76.5	4.81		
Mount Carmel†	.....	.....	.....	5.10		Belvoir†	99	52	77.6	3.88		Spirit Lake†	99	50	74.1	5.08		
Mount Pulaski	96	51	75.8	3.10		Britt	97	48	72.6	3.80		Stuart	98	52	76.1	7.60		
Mount Vernon	100	56	80.0	3.00		Cedar Rapids†	102	52	75.8	4.35		Thurman	100	48	76.4	1.50		
New Burnside†	103	54	80.1	5.81		Centerville	101	55	78.0	5.04		Toledo	98	50	75.3	2.26		
Olney a* ¹	100	53	80.4	.....		Charlton	98	53	77.1	1.74		Waukegan	97	48	73.1	4.35		
Oswego* ¹	97	50	75.3	3.63		Charles City	96	48	74.6	3.42		Waterloo	100	50	74.9	4.16		
Ottawa†	99	54	77.2	2.99		Clarinda†	100	56	78.8	2.68		Waunkee	97	48	73.1	3.32		
Palestine†	98	55	77.8	2.06		Clinton	99	54	77.0	1.69		Waverly	97	53	74.8	3.32		
Paris	104	52	78.4	2.70		College Springs	103	53	79.0	2.83		Webster City	97	50	75.7	1.76		
Peoria a†	.....	.....	.....	5.90		Corning†	99	49	76.6	1.90		Westbend*† ¹	96	57	73.6	4.16		
Peoria b†	101	53	78.6	4.65		Council Bluffs	108	54	78.8	1.82		Whitten* ¹	98	60	74.7	2.63		
Philpot	100	55	78.8	5.48		Cresco†	94	49	74.2	2.18		Wilton Junction†	100	51	76.5	3.19		
Plumbhill†	99	55	78.8	3.91		Decorah†	97	49	73.6	1.89		Winterset†	97	50	74.0	5.43		
Rantoul†	100	52	76.0	5.39		Delaware* ¹	97	54	73.9	1.94		<i>Kansas.</i>	.....	.....	.....	.....
Reynolds	99	55	76.2	4.05		Delaware†	100	45	74.2	2.42		Abilene†	106	53	80.9	3.74		
Riley†	95	51	74.4	1.57		Fairfield†	96	49	75.8	3.63		Achilles* ³	107*	64	74.8	2.83		
Robinson*† ³	100	60	76.2	2.79		Fayette†	98	53	74.4	2.88		Altcoona*† ³	101	60	73.2	2.44		
Roundgrove†	103	53	77.6	8.05		Fonda†	101	51	74.8	5.07		Anthony	.....	.....	.....	0.88		
St. Charles*† ¹	96	53	76.1	3.41		Forest City	95	52	72.2	4.59		Assaria* ⁵	106	62	84.6	2.30		
St. John*† ¹	101	53	80.8	1.91		Fredericksburg	94	64	79.3	5.91		Atchison†	99	55	78.5	3.60		
Scales Mound	98	48	74.4	2.70		Galva†	101	45	76.2	2.72		Baker	101	56	80.5	2.14		
Streator†	98	55	77.4	2.71		Gardengrove	102	47	76.0	2.16		Beloit†	105	54	80.0	3.96		
Sycamore†	96	51	74.6	3.03		Gladbrook	99	52	70.9	3.98		Burlington†	103	53	81.2	1.41		

TABLE II.—*Meteorological record of voluntary and other cooperating observers—Continued.*

Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.	
	Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.
Kansas—Cont'd.	°	°	°	In.	In.	Kentucky—Cont'd.	°	°	°	In.	In.	Maryland—Cont'd.	°	°	°	In.	In.
Goodland.....	108	45	78.6	2.54		Sergeant.....	.....	.....	.....	4.60		Smithsburg.....	90	59	74.8	5.53	
Gove*†.....	103	59	79.2	4.77		Shebly City.....	.....	.....	.....	4.83		Solomons*.....	92	64	76.6	7.39	
Grainfield*.....	104	55	77.8	3.75		Sheblyville.....	101	55	78.1	5.91		Sunnyside.....	93	46	68.8	5.51	
Grenola.....	101	51	79.2	4.63		Southfork*.....	.....	.....	.....	7.53		Taneytown†.....	100	57	77.6	7.27	
Halstead.....	100	57	77.4	1.56		Vanceburg.....	99	55	76.8	4.15		Van Bibber.....	96	58	76.0	9.26	
Hays†.....	.....	.....	.....	2.83		Williamsburg†.....	97	55	77.3	7.80		Western Port.....	102	52	75.6	3.01	
Horton.....	102	55	79.2	2.36		Louisiana.	.....	.....	.....	.....		Massachusetts.	.....	.....	.....	.....
Hutchinson†.....	103	54	80.4	3.43		Abbeville.....	96	66	82.0	6.75		Amherst.....	92	51	71.8	13.87	
Independence†.....	105	56	82.1	7.03		Alexandria†.....	100	63	82.6	3.40		Bluehill (summit).....	89	52	69.2	4.86	
Lakin†.....	110	42	80.2	2.25		Amitet†.....	102	63	83.8	8.09		Cambridge.....	94	53	72.6	4.06	
Lawrence.....	100	58	79.0	1.70		Bastrop†.....	99	59	83.5	2.42		Chestnut Hill.....	94	52	72.4	4.88	
Lebo†.....	103	58	80.9	0.93		Baton Rouge†.....	97	62	82.5	5.38		Concord†.....	94	52	71.2	4.50	
Linn.....	.....	.....	.....	6.20		Calhoun†.....	100	60	84.0	3.32		Fallriver.....	87	55	70.9	4.60	
Macksville.....	105	54	79.4	3.35		Cheneyville†.....	98	62	82.2	4.53		Framingham.....	94	53	72.6	5.34	
McPherson.....	103	52	79.5	7.13		Clinton†.....	100	62	82.3	3.73		Groton.....	94	50	70.8	6.57	
Manhattan b.....	104	54	80.8	3.44		Como*.....	98	64	82.0	7.29		Iyanilla*†.....	86	56	70.2	4.44	
Manhattan c.....	102	58	78.8	3.97		Covington.....	98	63	82.8	3.30		Lawrence.....	100	52	74.6	3.02	
Marion†.....	.....	.....	.....	1.98		Donaldsonville†.....	98	65	83.0	5.30		Lowell a.....	92	53	72.6	4.62	
Meade†.....	.....	.....	.....	2.55		Jeanerette.....	100	60	79.1	7.63		Middleboro.....	88	47	70.8	4.80	
Medicine Lodge†.....	108	53	82.8	1.84		Lafayette†.....	97	64	82.0	8.32		Monson.....	92	55	71.6	9.45	
Minneapolis†.....	107	52	81.2	2.00		Lake Charles.....	99	66	83.6	2.04		New Bedford a.....	88	58	69.8	3.85	
Morantown†.....	100	53	79.9	1.26		Lake Providence.....	102	62	83.5	.....		North Billerica.....	97	52	72.1	3.75	
Morland.....	103	49	76.7	3.75		Lawrence.....	98	61	84.6	4.72		Springfield Armory.....	92	49	75.3	14.99	
Mounthope*†.....	102	58	82.2	1.44		Lawrence.....	98	61	84.6	4.72		Taunton b.....	87	51	71.0	5.75	
Ness City.....	58	.....	.....	3.75		Lincoln.....	104	63	84.6	2.00		Wakefield.....	95	52	72.0	.....
Newton.....	104	50	80.8	1.71		Monroe.....	100	62	82.2	4.30		Westboro†.....	95	51	72.6	6.49	
Norton.....	104	47	75.5	2.09		Montgomery.....	104	63	84.4	2.00		Worcester b.....	92	54	73.4	7.25	
Norwich†.....	105	61	83.6	1.18		New Iberia.....	95	70	82.7	7.23		Michigan.	.....	.....	.....	.....
Oberlin†.....	.....	.....	.....	3.65		Oakridge†.....	103	58	83.8	5.31		Adrian.....	100	57	74.8	1.56	
Olathe*†.....	105	58	80.0	1.40		Oakridge†.....	98	64	82.5	3.50		Allegan.....	99	48	73.5	0.95	
Osage City†.....	103	52	80.1	2.01		Oberlin.....	98	64	82.5	3.50		Alma.....	100	51	73.2	4.63	
Osborne.....	.....	.....	.....	2.62		Opelousas†.....	98	64	81.3	2.03		Ann Arbor.....	102	54	75.5	1.66	
Oswego.....	102	54	81.7	6.26		Paincourtville†.....	97	60	82.2	4.14		Arbela.....	101	54	73.9	8.11	
Ottawa.....	103	58	79.0	1.00		Plain Dealing†.....	101	65	84.5	2.45		Baldwin.....	100	40	71.8	2.17	
Pleasant Dale.....	107	53	80.8	3.35		Rayne.....	100	66	83.4	4.68		Ball Mountain.....	95	55	73.0	3.09	
Pratt.....	108	58	82.6	0.05		Robeline.....	101	58	82.1	0.44		Baraga.....	99	44	68.8	3.15	
Rome*†.....	102	53	79.6	1.53		Ruston.....	99	64	85.2	3.41		Battle Creek.....	101	55	76.0	1.69	
Russell.....	106	.....	.....	2.50		Schriever.....	98	63	83.1	6.99		Bay City b.....	100	53	73.0	10.10	
Salina*.....	107	55	83.5	2.91		Shell Beach.....	97	72	84.0	3.37		Benton Harbor.....	97	50	74.6	0.16	
Scott City.....	106	50	77.5	3.84		Southern University†.....	92	65	80.2	2.45		Benzonia.....	98	53	72.0	4.58	
Sedan†.....	103	52	81.2	4.06		Sugar Ex. Station†.....	95	66	83.3	3.03		Berlin.....	97	51	71.3	2.98	
Seneca.....	100	58	78.5	3.97		Sugartown†.....	97	66	87.0	0.90		Berrien Springs.....	98	50	75.0	0.13	
Sharon Springs*†.....	106	55	82.0	3.75		Venice†.....	97	68	81.4	2.93		Big Rapids.....	97	50	71.8	2.01	
Toronto.....	108	49	80.2	3.17		Wallace.....	96	68	82.8	4.49		Birmingham.....	101	50	72.2	3.22	
Ulysses†.....	107	48	79.4	1.85		Whitehall.....	101	61	82.8	5.83		Boon.....	95	44	69.8	3.21	
Viroqua†.....	107	51	80.8	1.45		White Sulphur Springs.....	101	63	84.2	3.77		Calumet.....	92	50	67.6	8.80	
Wallace*†.....	111	52	80.0	2.72		Bar Harbor.....	91	40	64.8	5.63		Carsonville.....	97	52	71.7	3.52	
Wamego*†.....	104	58	80.0	4.87		Belfast*†.....	92	54	65.2	3.19		Charlevoix.....	96	50	71.6	1.75	
Wellington*†.....	98	58	80.7	1.40		Cornish*.....	93	52	69.7	7.19		Cheboygan.....	101	50	71.6	9.58	
Winona*.....	106	57	76.0	4.50		Fairfield.....	98	46	69.4	8.52		Clinton.....	104	52	75.8	2.34	
Yates Center.....	101	50	79.6	1.50		Flagstaff.....	96	39	68.0	7.77		East Tawas.....	96	52	71.6	2.99	
Kentucky.	.....	.....	.....	.....		Fort Fairfield.....	97	42	66.3 ^b	6.15		Eloise.....	98	54	73.8	2.91	
Alpha†.....	96	55	76.6	9.05		Gardiner.....	97	49	71.8	3.15		Escanaba†.....	88	51	71.4	3.78	
Ashland.....	102	54	77.2	4.50		Klineo†.....	98	50	68.2	8.37		Fairview.....	95	53	73.8	1.78	
Bardstown†.....	98	54	78.0	8.49		Lewiston.....	98	52	71.9	6.68		Fitchburg.....	100	50	72.3	3.55	
Blandyville†.....	98	53	79.1	3.48		Mayfield.....	95	44	68.2	8.04		Flint.....	99	51	72.5	3.90	
Bowling Green a*†.....	101	54	76.6	3.76		North Bridgton.....	95	48	70.8	13.25		Gladwin.....	94	52	71.1	3.18	
Bowling Green b†.....	102	60	80.7	2.98		Orono.....	93	43	68.2	2.02		Grand Rapids b.....	100	55	76.3	1.72	
Burnside†.....	.....	.....	.....	4.77		Parke.....	98	40	64.8	5.63		Grape.....	98	53	75.4	8.57	
Caddo†.....	98	54	76.6	6.59		Parsons.....	97	49	71.8	3.15		Grayling.....	101	45	72.6	2.80	
Canton*†.....	101	60	79.0	3.82		Parsons.....	97	49	71.8	3.15		Hanover.....	102	53	74.4	4.05	
Carlisle.....	101	55	76.0	3.11		Parsons.....	97	49	71.8	3.15		Harrison a.....	99	51	71.4	2.73	
Carrollton†.....	102	56	79.8	5.80		Parsons.....	97	49	71.8	3.15		Harrisonville.....	99	52	69.0	4.28	
Catlettsburg†.....	.....	.....	.....	5.80		Parsons.....	97	49	71.8	3.15		Hart.....	99	47	74.8	2.18	
Earlington.....	95	58	77.5	4.05		Parsons.....	97	49	71.8	3.15		Hastings.....	100	53	74.1	2.99	
Edmonton†.....	95	58	77.5	4.00		Parsons.....	97	49	71.8	3.15		Hayes.....	97	48	70.8	3.74	
Edmonton†.....	95	58	76.4	4.00		Parsons.....	97	49	71.8	3.15		Highland Station.....	98	53	73.8	3.03	
Ensor.....	100	55	79.1	0.89		Parsons.....	97	49	71.8	3.15		Hillsdale.....	98	53	73.8	2.38	
Hubank†.....	97	50	75.3	6.37		Parsons.....	97	49	71.8	3.15		Holland * ¹⁰	93	51	72.7	6.05	
Falmouth†.....	.....	.....	.....	5.82		Parsons.....	97	49	71.8	3.15		Humboldt.....	94	52	72.0	3.10	
Fords Ferry†.....	102	54	79.5	4.94		Parsons.....	97	49	71.8	3.15		Iowa.....	103	50	73.7	3.32	
Frankfort†.....	101	54	77.6	3.12		Parsons.....	97	49	71.8	3.15		Iron River.....	94	45	65.6	5.26	
Georgetown.....	95	57	77.8	.....		Parsons.....	97	49	71.8	3.15		Ivan.....	98	55	74.1	2.98	
Greensburg†.....	103	52	79.2	4.00		Parsons.....	97	49	71.8	3.15		Jackson.....	103	55	75.8	2.09	
Henderson†.....	99	59	79.6														

TABLE II.—*Meteorological record of voluntary and other cooperating observers—Continued.*

Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.	
	Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.
Michigan—Cont'd.						Minnesota—Cont'd.						Missouri—Cont'd.					
Newberry	°	°	°	Ins.	3.99	Shakopee ⁶	°	°	°	Ins.	Ins.	Liberty	°	°	°	Ins.	Ins.
North Manitou Island ^{*10}	96	46	67.8	3.99		Spring Park	96*	46	74.8	5.46		McCune ^{*11}	102	53	73.0	1.45	
North Marshall	96	55	68.6			Tower ¹	91	28	67.5	5.92		Mansfield	96	59	78.0	9.97	
Northport	99	53	73.2	2.60		Two Harbors ¹	83	49	64.0	9.90		Marblehill	100	49	78.6	1.59	
Old Mission	92	53	71.4	1.97		Wabasha ¹	90	57	73.2	8.65		Marshall ¹	101	53	73.4	2.17	
Olivet	96	55	73.6	6.31		Willmar ¹	95	51	72.0	5.59		Maryville	101	53	78.0	3.77	
Omer	100	47	70.8	3.05		Worthington	94	52	71.9	5.55		Mexico ¹	100	55	79.6	8.78	
Ovid	100	50	73.6	5.28		Zumbrota ¹	94*	42	73.8			Mineralspring	95	51	76.4	4.60	
Owosso	101	53	74.0	3.88								Montreal ^{*11}	100	59	77.4	1.45	
Parkville												Mount Vernon	101	52	80.8	3.30	
Petoskey	98	52	73.0	1.55								Neosho	95	49	77.8	1.85	
Plymouth	101	49	72.9	2.99								Nevada ^{*5}	100	56	81.2	4.19	
Pontiac	98	55	74.5	2.93								New Haven ^{*1}	97	60	81.0	3.73	
Port Austin	98	53	70.0	1.05								New Madrid	106	56	82.3	2.40	
Powers	98	45	70.6	3.13								New Palestine ^{*11}	96	56	88.3	3.38	
Reed City	99	43	71.3	2.90								Oakfield	100	56	79.8	3.47	
Rockland	94	46	68.8	3.60								Oakmound				3.00	
Rogers City	96	44	68.4	4.40								Oakridge ^{*4}				2.50	
Saginaw	101	54	76.6	6.87								Olden ¹	99	50	77.6	3.56	
St. Ignace	91	50	70.0	2.42								Oregon ^a	101	56	79.2	2.16	
St. Johns	100	54	75.4	3.01								Oregon ^b ¹	101	56	78.4	2.06	
Sandbeach ^b	99	35	67.0	3.02								Oscocela ¹				2.38	
Sidnaw	98	40	67.4	2.03								Oto				2.50	
Somerset	98	58	73.4	2.87								Palmyra ^{*6}	97	60	80.4	6.07	
South Haven	95	49	72.4	0.60								Phillipsburg ^{*11}	104	58	78.0	1.57	
Stanton	100	54	72.8	3.28								Pickering ^{*3}	102	52	76.6	2.47	
Sturgeon Point ^{*10}	88	45	70.0									Platte River ^{*3}	100	56	77.2	2.52	
Thomaston	95	41	69.2	9.40								Potosi	97	48	74.3	3.06	
Thorntown	98	58	74.8	3.56								Princeton	106	53	80.8	2.17	
Thunder Bay Island ^{*10}	86	54	69.0									Rhineland	98	55	78.5	5.19	
Valley Center	97	49	71.5	5.85								Richmond	100	59	78.8	3.15	
Vandalia	100	52	76.8	1.80								Rolla				4.15	
Waskep ¹	97	48	73.8	2.03								St. Charles	100	56	79.0	3.33	
Waverly	99	49	73.6	1.34								St. James ^{*3}	90	56	76.8		
West Harrisville	97	52	70.8	5.14								St. Joseph ¹	97	53	77.7	2.20	
Wetmore	94	39	66.4	2.77								St. Louis	97	53	77.7	2.07	
White Cloud	99	50	73.6	3.11								Sarcocie ^{*3}	97	50	77.0	3.55	
Ypsilanti	96	55	73.6	3.42								Seymour ^{*6}	102	52	76.8	3.71	
Minnesota.												Sheibina				3.80	
Adat	90	50	70.2	7.83								Sikeston	99	54	78.9	1.40	
Alexandria ¹	92	53	71.1	8.19								Steffenville				3.50	
Beardsley	95	47	70.6	5.35								Stellada ¹	105	55	78.7	2.43	
Bermidji	94			8.60								Sublett	100	51	78.2	2.16	
Bingham Lake	96	50	74.6									Unionville ¹	101	51	78.7	3.24	
Bird Island	93	58	71.4	6.86								Vichy	102	54	79.0	3.00	
Blooming Prairie ¹	95	50	72.1	9.10								Virgil City				3.53	
Bonniwell	95	53	73.0	5.03								Warrenton	99	54	78.3	3.71	
Caledonia ¹	92	49	73.2	2.79								Willow Springs	101	49	77.4	2.95	
Camden	90	50	72.1	4.64								Zelton ¹	101	52	77.7	0.84	
Collegeville	56	28	72.8	6.84								Montana.					
Crookston ¹	89	50	70.0	8.45								Augusta ¹	92	48	63.3	2.07	
Detroit City	92	50	71.0	7.33								Bigtimber	96	49	67.8	0.93	
Faribault	97	52	74.2	6.80								Billing ¹	101	40	68.2	0.78	
Farmington ¹	96	52	70.6	4.49								Boulder	98*	37	61.6*	1.38	
Fergus Falls ¹	94	53	71.6	3.00								Bozeman ¹	92	38	63.0	3.59	
Glencoe	94	45	71.6	6.94								Bozeman Exper. Stat'n.	92	38	63.0	3.00	
Glenwood ¹	101	40	72.2	8.37								Butte ¹	92	38	59.8	1.19	
Grand Meadow ¹	95	50	73.0	8.05								Castile	85	32	57.6	1.68	
Koochicking	90	46	68.3	6.18								Chinook ¹	99	47	69.5	1.26	
Lake City	97	49	73.3	4.40								Choteau ¹	93	37	63.2*		
Lakeside ¹	93	53	72.2	7.35								Columbia Falls	94	36	60.4	2.91	
Lake Winnibigoshish ¹	90	53	68.0	9.87								Ekalaka	98	43	69.6	0.68	
Lambert ¹	90	53	71.8	9.80								Fort Benton	96	45	69.9	2.36	
Lawrence	102	46	70.8	5.85								Fort Custer ¹	102	48	74.6	1.60	
Leech Lake ¹	92	50	69.2	6.00								Fort Keogh ¹	103	48	73.0	0.19	
Lesueur ^{*1}	98	58	73.7	10.80								Fort Logan ¹	90	38	60.4	3.21	
Long Prairie ¹	95	52	72.1	5.09								Fort Missoula	91	40	62.6	2.14	
Lutsen	83	46	61.0	9.99								Glendive ¹	100	53	73.6	1.70	
Luvernet ¹	94	47	72.6	6.59								Greatfalls ¹	96	45	67.4	3.24	
Mapleplain	93	56	74.8	4.91								Hogan ¹	96	39	59.4	1.00	
Maplewood ^{*1}	92	57	73.5	4.50								Kalispell	98	40	60.6	1.91	
Mazzeppa ¹	104*	46	75.6	4.50								Kipp ¹	85	32	59.1	1.00	
Milaca	100	50	78.8	12.81								Livingston ¹	92	42	65.0	1.63	
Milan ¹	95	50	73.0	3.48								Manhattan ¹	94	32	64.0	0.53	
Minneapolis ^a	97	53	73.8	4.93								Martinsdale ¹	90	38	62.0	1.74	
Minneapolis ^b	94*	50	72.5	4.70								Marysville ¹	91	38	60.6	2.14	
Minnesots City ^{*11}	96	48	73.5	4.79													

TABLE II.—*Meteorological record of voluntary and other cooperating observers—Continued.*

Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.	
	Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.
Nebraska—Cont'd.	o	o	o	Ins.	Ins.	Nebraska—Cont'd.	o	o	o	Ins.	Ins.	New Jersey.	o	o	o	Ins.	Ins.
Aurora ^a	104	58	88.6	1.07		Salem ^a	100	60	82.2	2.30		Asbury Park	99	61	71.8	8.92	
Bassett.....	102	47	72.8	3.50		Santee Agency ^t	104	51	77.6	2.71		Barnegat	90	64	75.6	10.03	
Beatrice ^t	102	53	78.8	4.76		Sargent .....	.....	.....	.....	2.19		Bayonne	93	63	75.5	16.96	
Beaver City ^t	107	51	78.1	3.13		Schuyler .....	.....	.....	.....	1.36		Beachhaven	89	64	73.6	8.76	
Benedict .....	.....	.....	.....	2.24		Seneca ^a	90	60	78.6	4.54		Belvidere	97	58	78.8	10.92	
Benkelman.....	.....	.....	.....	2.03		Seward ^a	99	58	77.8	2.92		Beverly ^t	96	58	75.7	11.11	
Bluehill ^a	104	58	77.6	1.94		Springfield ^a	101	54	78.4	3.79		Billingsport ^a	92	67	75.4	9.27	
Brockenbow .....	.....	.....	.....	1.11		Springview	106	58	76.6	1.12		Blairstown	96	58	73.9	9.94	
Burchard .....	.....	.....	.....	5.87		Stanton ^a	101	56	75.7	2.19		Boonton	100	56	74.0	11.63	
Burwell .....	.....	.....	.....	1.87		Stockham .....	.....	.....	.....	1.70		Bridgeton	94	65	77.9	11.93	
Callaway ^t	101	48	74.6	0.70		Strang ^a	102	62	82.2	2.99		Camden	91	61	74.6	6.11	
Camp Clarke	104	34	70.1	3.79		Tecumseh ^t	103	54	79.4	2.90		Camden	91	61	74.6	6.11	
Central City .....	.....	.....	.....	2.38		Teekaham.....	102	48	76.8	0.88		Camden	91	61	74.6	6.11	
Chester ^a	100	60	78.2	7.44		Thedford ^a	100	54	73.6	4.30		Camden	91	61	74.6	6.11	
Columbus ^t	97	48	71.8	2.87		Turlington ^t	103	51	77.5	2.45		Camden	91	61	74.6	6.11	
Cornelia .....	.....	.....	.....	3.50		Valentine ^t	100	48	78.7	4.71		Camden	91	61	74.6	6.11	
Creighton ^t	100	49	74.2	2.58		Vaiparaiso .....	.....	.....	.....	2.78		Camden	91	61	74.6	6.11	
Crete	99	54	77.5	3.73		Wakefield	100	49	75.1	2.89		Camden	91	61	74.6	6.11	
Culbertson .....	.....	.....	.....	1.29		Wallace ^a	106	52	76.6	0.86		Camden	91	61	74.6	6.11	
Curtis ^a	104	53	77.5	0.60		Weeping Water ^a	102	48	75.4	1.87		Camden	91	61	74.6	6.11	
David City ^a	100	60	77.8	1.90		Westpoint ^t	100	51	76.4	2.24		Camden	91	61	74.6	6.11	
Dawson	103	51	79.2	3.20		Whitman .....	.....	.....	.....	0.35		Camden	91	61	74.6	6.11	
Divide .....	.....	.....	.....	0.73		Wilber ^a	96	66	82.3	5.11		Camden	91	61	74.6	6.11	
Dunning ^a	105	58	77.0	1.55		Willard .....	.....	.....	.....	2.42		Camden	91	61	74.6	6.11	
Eden .....	.....	.....	.....	4.85		Wilsonville ^a	104	62	80.6	1.05		Junction	90	59	75.2	8.72	
Edgar ^a	106	59	79.6	1.63		Wistner ^a	101 ^b	60 ^b	79.2 ^b	1.39		Lambertville	90	59	75.2	10.53	
Elba .....	.....	.....	.....	1.46		Woodlawn .....	.....	.....	.....	3.00		Moorestown	96	61	76.0	11.35	
Ericson ^a	103	66	82.2	1.98		York ^a	106	61	80.5	1.80		Newark ^b	96	60	75.0	19.09	
Ewing ^t.....	.....	.....	.....	2.76		Nevada.	.....	.....	.....	.....		New Brunswick ^a	103	60	76.2	18.93	
Fairbury ^t	102	53	79.6	6.26		Austin	91	40	66.8	0.89		New Brunswick ^b	94	58	72.8	18.06	
Fairmont ^t	102	53	77.5	2.06		Battle Mountain ^a	99	45	68.6	0.00		Newton	97	54	71.4	10.57	
Filley .....	.....	.....	.....	5.67		Beowawe ^a	98	50	71.8	0.40		Ocean City	98	61	73.0	6.70	
Fort Robinson	101	40	70.7	3.60		Candelaria ^t	97	46	73.4	0.20		Oceanic	99	62	73.1	12.88	
Franklin	112	52	79.6	2.45		Carlin ^a	106	48	71.2	T.		Pateros	97	60	74.8	9.98	
Fremont ^t	100	49	76.6	1.23		Carson City	92	25	65.2	0.27		Perth Amboy	94	60	74.8	16.16	
Geneva ^t	103	50	77.4	2.39		Cloverdale ^a	91	59	72.9	0.06		Plainfield	95	59	74.3	13.93	
Genoa	100	54	75.7	4.59		Cranes Ranch .....	.....	.....	.....	0.85		Rancocas	96	64	78.5	12.21	
Gering ^t	104	38	70.8	2.76		Downeyville	107	46	77.6	0.58		Readington ^a	96	56	78.5	.....
Gothenburg	108	48	78.0	0.70		Elko ^a	102	40	61.7	0.00		Rivervale	100	56	73.9	8.91	
Grand Island ^b	104	52	76.6	2.40		Elko (near)	103	35	68.5	.....		Roseland	98	56	73.2	11.51	
Greeley .....	.....	.....	.....	0.90		Ely	94	30	63.4	0.80		Sergeantsville	95	54	73.4	9.83	
Halgier .....	.....	.....	.....	0.97		Fenelon ^a	97	41	67.4	T.		Somerville	99	58	75.6	11.08	
Hartington ^t	97	51	74.0	3.78		Genoa	100	38	71.8	0.00		South Orange	94	59	74.0	15.80	
Harvard ^a	102	59	78.1	1.79		Golconda ^a	98	44	69.4	0.00		Staffordville	93	59	74.0	12.19	
Hastings ^a	98	58	77.1	3.89		Gold Creek ^a	94	42	64.2	0.81		Toms River	93	59	74.2	12.08	
Hayes Center .....	.....	.....	.....	2.09		Halleck ^a	102	51	69.3	0.38		Trenton	96	65	77.8	9.87	
Hay Springs	104	44	71.4	3.02		Hawthorne ^a	95	59	76.7	0.00		Vineland	98	59	75.6	12.56	
Hebron ^t	99	53	76.8	3.56		Hawthorne ^b	97	47	73.0	0.80		Woodbine	99	57	78.6	7.07	
Hickman .....	.....	.....	.....	5.13		Hot Springs ^a	102	62	80.6	T.	New Mexico.	.....	.....	.....	.....
Holdrege ^a	101	62	79.8	3.85		Humboldt ^a	95	56	73.5	0.00		Albert	99	52	76.6	1.56	
Holdrege ^b	101	62	79.8	3.85		Keyser's Springs .....	.....	.....	.....	0.40		Albuquerque ^t	94	52	75.4	0.31	
Imperial ^a	108	45	76.0	1.23		Lewers Ranch	92	30	65.4	.....		Alma	94	52	73.4	3.04	
Indiana ^a (near)	100	62	77.2	0.75		Los Vegas ^a	100	55	77.6	T.		Angus V. V. Ranch	94	48	65.4	5.15	
Kearney ^a	98	60	79.6	4.01		Lovetock ^a	103	68	81.4	0.00		Aztec ^t	94	39	69.8	0.78	
Kennedy	105	45	74.7	3.68		McGill ^a	100	30	63.2	0.18		Bernalillo ^t	97	56	75.8	0.69	
Kimball ^t	100	43	71.0	6.42		Midas	92	47	68.8	0.39		Bluemont ^t	101	54	70.7	0.75	
Kirkwood ^a	103	58	74.7	3.33		Mill City ^a	105	50	71.9	0.00		Buckmans	85	27	60.4	3.30	
Lexington ^t	102	47	78.1	0.79		Monitor Mill	96	30	63.7	0.19		Clayton	101	50	74.1	1.36	
Lincoln ^b	102	53	79.2	2.79		Osceola	96	44	72.4	0.27		Deming ^a	104	65	80.0	2.89	
Lincoln ^a	103	57	76.8	2.61		Palisade ^a	97	60	77.0	0.00		East Las Vegas ^t	86	43	67.3	1.18	
Lodgepole ^t	104	38	71.7	2.15		Palmetto	94	35	68.0	1.41		Eddy	104	55	81.2	0.50	
Loup ^a	102	50	76.6	0.78		Reno State University	105	45	73.2	0.00		Engle ^t	100	57	77.8	3.79	
Lynch ^a	99	50	74.5	3.51		Reno State University	98	39	67.3	T.		Espanola ^t	95	47	71.7	0.92	
Lyon ^t.....	.....	.....	.....	1.05		Ruby Valley .....	.....	.....	.....	0.54		Fort Bayard	96	51	71.5	2.38	
McCook ^a	101	58	79.0	0.81		St. Thomas	116	60	89.8	T.		Fort Union	98	47	68.6	2.36	
McCool .....	.....	.....	.....	1.84		San Antonio	100	42	71.5	0.18		Fort Wingate	94	47	69.4	0.91	
Madison ^a	97	50	78.8	3.38		Silver Peak	101	48	74.9	0.95		Galisteo ^t	94	46	70.8	1.08	
Madrid ^a	108	55	76.6	1.90		Tecoma ^a	102	50	69.1	0.00		Gallinas Spring ^t	102	54	73.8	3.05	
Marquette .....	.....	.....	.....	1.82		Toano ^a	99	50	70.2	0.58		Gila	101	55	77.9	1.73	
Minden ^a	102	48	74.4	3.05		Tuscarora	94	32	62.0	0.37		Hillsboro ^t	95	53	76.7	3.44	
Minden ^b	102																

TABLE II.—*Meteorological record of voluntary and other cooperating observers—Continued.*

Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.	
	Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.
<i>New York—Cont'd.</i>																	
Akron	o	o	o	In.	In.	<i>North Carolina.</i>	o	o	o	In.	In.	<i>North Dakota—Cont'd.</i>	o	o	o	In.	In.
Angelica †	95	50	70.7	5.14		Abshers	99	51	75.2	8.98		Wilderlee †	.....	.....	68.8	8.88	
Appleton	98	56	72.5	5.08		Asheville †	98	50	71.8	4.40		Willow City *	96	41	68.4	3.77	
Arcade	95	53	70.5	8.85		Beaufort	94	67	80.2	4.60		Woodbridge	92	43	65.8	4.41	
Atlanta	.....	.....	.....	7.47		Biltmore †	98	46	72.7	3.70		<i>Ohio.</i>	.....	.....	.....	.....	.....
Avon	102	55	74.8	4.08		Bryson City †	.....	.....	.....	5.29		Akron	98	54	74.8	5.06	
Baldwinsville	98	55	74.4	5.95		Chapelhill †	101	60	78.2	1.43		Annapolis	108	50	74.0	4.11	
Bedford	92	57	71.6	11.42		Edenton	95	63	80.1	3.06		Ashland	94	52	73.6	3.68	
Big Sandy * ¹⁰	93	56	72.2	.....		Experimental Farm	97	65	79.1	5.65		Ashtabula	94	55	73.0	10.69	
Binghamton †	96	54	71.8	2.51		Fairbluff †	.....	.....	.....	7.94		Atwater	.....	.....	.....	4.60	
Bolivar	95	48	69.3	8.86		Fayettevillet †	99	59	79.0	11.11		Auburn	.....	.....	.....	7.65	
Boyd's Corners	.....	.....	.....	12.51		Flatrock	90	48	71.5	4.22		Bangorville	98	52	74.4	4.87	
Brentwood	92	55	72.0	10.00		Goldsboro †	99	63	80.2	9.52		Bellefontaine	100	53	76.8	6.29	
Brooklyn	92	61	74.4	11.06		Greensboro †	101	58	78.6	5.35		Bement	.....	.....	.....	5.92	
Canajoharie	99	53	75.1	6.48		Greenville	95	.....	.....	3.12		Benton Ridge	104	52	76.3	3.99	
Canton	94	54	73.8	7.58		Henderson †	98	62	78.2	6.82		Bethany	105	49	75.2	6.85	
Carmel	93	56	73.3	16.64		Highlands	84	45	66.0	9.44		Bigprairie	97	51	74.0	4.85	
Catskill	95	58	73.3	9.82		Horse Cove	91	55	72.6	9.25		Bimola	.....	.....	.....	4.70	
Cedar Hill	.....	.....	.....	7.46		Jacksonville	99	59	79.7	4.69		Bissells	102	55	74.2	6.01	
Charlotte * ¹⁰	94	50	68.6	.....		Lenoir ††	92	56	74.3	3.69		Bloomingburg	99	58	75.4	5.99	
Chenango Forks	.....	.....	.....	4.86		Linville †	82	46	68.2	7.88		Bowling Green	99	52	74.8	2.81	
Cherry Creek	.....	.....	.....	6.23		Littleton †	97	58	77.6	8.94		Bucyrus	105	50	76.8	5.90	
Cooperstown †	91	53	70.5	4.86		Louisburg †	99	60	79.4	4.11		Cambridge	97	51	73.5	6.12	
Cortland	94	50	70.8	4.46		Lumbertont †	101	64	81.6	8.03		Camp Dennison	101	57	78.5	5.70	
De Kalb Junction	.....	.....	.....	4.94		Lynn †‡	91	.....	.....	7.54		Canal Dover	100	53	75.4	6.91	
Dryden	96	52	71.8	4.30		Manu	.....	.....	.....	2.39		Canfield	.....	.....	.....	10.55	
Eagle Mills	.....	.....	.....	4.05		Marion	93	54	74.4	6.98		Canton †	96	54	74.5	5.70	
Easton	.....	.....	.....	7.09		Moncure †	97	58	77.7	3.23		Carrollton	102	56	75.3	5.36	
Elizabethtown	94	44	67.8	13.00		Morganton	97	57	77.3	6.73		Cedarville	.....	.....	.....	4.43	
Elmira	96	55	74.4	3.23		Mountairy †	95	52	75.0	5.06		Celina	.....	.....	.....	2.13	
Fleming	95	57	73.4	3.46		Mount Pleasant	98	58	77.9	6.25		Cherryfork	104	50	77.9	4.81	
Fort Niagara †	95	58	74.0	7.01		Murphy †	.....	.....	.....	10.39		Chillicothe †	98	56	76.8	5.62	
Franklinville	96	51	70.4	5.98		Newbern †	95	68	80.7	2.55		Circleville	98	56	76.8	6.06	
Friendship	97	47	69.5	4.47		Oakridge †	97	57	76.8	5.18		Clarksville	100	53	76.6	4.94	
Garrattsville	90	52	69.0	6.21		Pantego * ¹⁰	90	70	75.8	7.58		Cleveland a	95	56	74.4	8.53	
Glens Falls	94	52	73.1	8.82		Pittsboro †	95	59	76.8	6.82		Cleveland b	90	53	75.0	2.03	
Gloversville	98	52	70.7	9.80		Rockingham †	102	60	80.4	4.94		Clifton	108	51	76.8	3.12	
Haskinsville	.....	.....	.....	5.56		Roxboro †	98	58	75.9	4.10		Coaltown	103	51	76.8	4.95	
Honeymead Brook	92	56	71.6	14.85		Salem †	98	56	77.5	4.71		Colebrook	99	57	75.8	7.14	
Humphrey †	90	52	69.5	7.77		Salisbury †	101	60	79.8	7.78		Dayton a	104	54	78.5	3.49	
Ithaca	94	56	72.4	3.25		Saxon †	103	58	77.6	3.89		Dayton b †	98	51	78.6	3.71	
Jamestown	95	53	71.8	5.93		Selma	99	60	79.4	6.45		Delaware	98	51	78.6	3.61	
Kings Station	.....	.....	.....	8.83		Settle	99	58	78.2	5.01		Demos	98	53	74.2	3.40	
Lake George	93	53	70.9	8.83		Skyuka	.....	.....	.....	9.12		Dupont	97	53	76.0	2.68	
Little Falls	94	53	71.2	4.68		Soapstone Mount †	99	54	78.8	2.07		Elyria	101	54	74.5	4.86	
Lockport	99	57	74.6	8.30		Southern Pines a †	102	60	79.4	7.96		Fairport Harbor * ¹⁰	98	60	75.2	.....
Lowville	95	50	70.6	2.96		Southern Pines b †	101	65	80.0	8.39		Fayetteville	98	54	76.4	10.42	
Lyndonville	.....	.....	.....	4.63		Southport †	100	64	80.4	3.62		Findlay	102	52	77.4	3.08	
Lyons	96	58	73.4	5.04		Springhope * ¹⁰	96	67	78.2	6.75		Frankfort	99	55	76.6	4.45	
Madison Barracks †	99	53	74.2	2.55		Tarboro	99	57	78.8	6.69		Garrettsville †	98	49	79.3	6.34	
Manhattan Beach	90	60	68.8	8.51		Waynesville †	89	47	69.7	4.89		Granville	97	58	75.4	5.37	
Middletown	96	53	73.2	9.14		Weidlon †	90	60	79.2	4.20		Gratiot	96	54	74.8	5.09	
Mohon Lake	93	58	70.8	14.71		Wileyton	95	59	78.4	4.64		Greenfield	100 ^d	57 ^d	78.0	4.96	
Mount Morris	.....	.....	.....	2.30								Greenhill	102	50	74.2	6.12	
Newark Valley	.....	.....	.....	4.43								Greenville	98	56	74.6	5.39	
New Lisbon	94	48	68.8	5.58								Hackney	.....	.....	.....	5.14	
Niagara Falls	.....	.....	.....	6.73								Hanging Rock	100	54	77.0	5.73	
North Hammond †	100	50	73.4	4.28								Hedges	100	53	75.0	0.82	
North Lake	91	50	67.6	4.15								Hillhouse	100	49	72.4	7.64	
Number Fourt.	90	49	64.0	6.46								Hillsboro †	105	55	77.6	5.00	
Ogdensburg	95	57	72.2	4.03								Hiram	96	53	78.0	6.51	
Oneonta	97	51	73.4	6.61								Hudson	96	49	75.2	4.45	
Oxford	98	48	71.0	8.04								Jacksonboro	101	49	78.0	3.40	
Palermo †	95	49	71.6	4.22								Kenton †	96	52	78.0	3.54	
Perry City	97	51	71.4	8.55								Killbuck	100	47	78.4	7.17	
Phoenix	.....	.....	.....	8.56								Lancaster	97	56	75.8	5.94	
Pine City	.....	.....	.....	5.10								Leipsic	101	52	75.5	4.87	
Pittsford	98	57	72.7	6.37								Levering	99	44	71.1	3.44	
Plattsburgh Barracks †	93	52	70.8	7.19								Logan	103	52	78.0	5.06	
Port Jervis	93	55	72.1	9.23								Lordstown	97	54	78.4	8.37	
Poughkeepsie	94	55	73.0	9.37								McArthur	97	52	78.0	6.32	
Primrose	96	58	74.1	11.12								McConnellsburg †	97	55	75.8	5.20	
Ridgeoway	96	58	73.2	5.51								Mansfield †	.....	.....	.....	3.91	
Rome	97	52	72.0	4.93								Marietta b	95	58	76.4	7.03	
Romulus	97	57	74.0	4.14								Marion	100	54	75.6	7.98	
Rose	.....	.....	.....	8.84								Medina	99	50	74.4	4.04	
St. Johnsville	91	58	70.8	4.67								Milfordton	97	50	74.2	4.88	
Saranac Lake	95	51	70.0	8.55								Milligan	100	58	78.6	9.44	
Schenecus.	.....	.....	.....	5.35								Millport	96	50	72.0	4.77	
Scottsville	.....	.....	.....	6.58								Montpelier	100	54	75.0	2.46	
Setauket †	98	60	72.4	18.18				</									

TABLE II.—*Meteorological record of voluntary and other cooperating observers*—Continued.

Stations.	Temperature. (Fahrenheit.)			Precipita- tion.			Stations.	Temperature. (Fahrenheit.)			Precipita- tion.			Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		
	Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.	Ins.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.	Ins.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.	
Ohio—Cont'd	o	o	o	Ins.	Ins.	o	Oregon—Cont'd.	o	o	o	Ins.	Ins.	o	Pennsylvania—Cont'd.	o	o	o	Ins.	Ins.	
Ottawa	99	55	76.1	2.25			Mount Angel †	90	46	65.0	0.24			Renovo †	95	55	73.6	4.80		
Pataskala †	101	52	76.2	4.19			Nehalem				2.22			Ridgway †				6.70		
Philo	101	53	76.3	7.00			Newbridge	100	38	65.2	0.38			Saegeertown	90	46	71.1	14.51		
Plattsburg	101	53	75.6	5.20			Newport	73	42	57.2	1.01			St. Marys	96	50	70.2	5.91		
Pomeroy	100	56	77.1	3.54			Pendleton	107	39	68.1	0.68			Salem Corners	91	54	70.7	6.84		
Portsmouth †	106	55	80.0	4.86			Prineville	98	34	62.8	0.00			Scranton	96	51	73.4	5.00		
Portsmouth †	106	55	80.0	4.86			Ridder's †	94	48	66.0	0.00			Seisholtzville				5.61		
Richwood							Riverside	101	34	66.8	0.35			Selingrove	95	54	75.6	5.08		
Ridgeville Corners	98	52	74.2	2.43			Salem †	87	48	63.4	0.64			Shawmont				11.45		
Ripley	98	54	77.1	4.73			Sheridan †	91	56	69.4	0.31			Shinglehouse	98	48	71.3	5.12		
Rittman	97	47	72.6	4.79			Silver Lake	92	28	59.5	0.07			Sinnamahoning				6.91		
Rockyridge	104	55	76.4	3.08			Silverton †	92	58	66.4	1.08			Smith's Corners				10.23		
Rosewood	97	53	74.4	3.93			Siskiyou †	90	45	64.5	0.00			Somerset	93	52	70.3	4.89		
Shenandoah	100	49	74.1	2.90			Sparta	92	31	62.7	0.04			South Bethlehem	96	56	76.8	3.28		
Sidney †	101	56	78.0	2.63			Springfield †	87	55	67.0	0.85			South Eaton	91	57	72.0	3.38		
Sinking Spring †	97	51	76.1	5.02			Stafford	89	44	63.4	0.95			State College	92	54	71.5	5.69		
Somerset †	96	59	77.7	4.81			The Dalles †	98	48	69.4	0.24			Sunbury				2.88		
Springboro							Umatilla				0.45			Swarthmore	94	62	76.4	10.48		
Spring Valley	101	54	76.8	5.44			Vale	102	38	67.0	0.09			Swiftwater	90	55	66.5	18.10		
Sylvania	99	50	74.1	2.29			Vernonia	97	37	60.8	0.76			Towanda	96	51	72.6	4.81		
Tiffin †	98	55	75.6	1.97			West Fork †	98	46	63.8	0.19			Uniontown	95	54	73.5	6.88		
Upper Sandusky	98	54	75.0	3.40			Weston	99	43	65.4	0.78			Warren †	95	51	72.0	6.18		
Urbania	94	54	75.2	4.78			Williams	98	40	64.7	0.00			Wellsboro †	95	52	71.0	5.46		
Vanceburg	99	55	76.1	3.89			Pennsylvania.							West Chester	92	59	74.8	9.91		
Van Wert	98	54	75.4	3.54			Altoona	94	57	74.9	3.28			West Newton †				4.51		
Vermilion	98	56	78.8	4.73			Aqueduct	108	57	78.0	3.78			White Haven	94	58	70.8	6.49		
Vickery	108	55	76.7	2.99			Beaver Dam							Wilkesbarre †	99	54	74.8	3.76		
Walnut							Bethlehem				4.84			Williamsport	98	57	73.0	4.77		
Warren							Blooming Grove	97	52	70.6	0.39			York †	95	56	75.7	3.69		
Wauseon	102	52	74.5	8.23			Brookville †							Rhode Island.						
Waverly	101	56	78.0	5.82			Brownsburg Lock							Bristol						
Waynesville							Cameron				6.81			Kingston	81	55	70.4	5.33		
Wellington	102	53	75.6	2.99			Canonsburg	98	57	75.8	2.10			South Carolina.						
Westerville							Carlisle	96	57	76.0	4.42			Allendale †	101	60	81.6	5.05		
Willoughby							Cassandra	91	51	70.4	3.44			Anderson †				6.06		
Wooster †	96	50	73.2	3.88			Cedar Run							Batesburg †	107	63	81.8	8.16		
Youngstown	99	51	72.2	7.45			Centerhall †	88	56	70.6	4.96			Blackville †	102	60	81.8	3.79		
Zanesville †							Chambersburg †	95	53	74.0	4.32			Camden †				5.94		
Oklahoma.							Costesville	95	57	75.7	6.47			Central †	101	56	79.1			
Alva	106	55	84.6	0.90			Confidence †	99	53	74.4	6.46			Cheraw †	104	58	81.2	6.08		
Anadarko †	104	51	83.2	2.19			Coopersburg	98	60	73.8	6.48			Cheraw †				6.64		
Arapaho †	107	54	82.2	1.74			Davis Island Dam †							Conway †				3.66		
Beaver							Derry Station	108	53	75.5	4.90			Darlington (near)				8.05		
Burnett †	102	48	80.3	2.42			Doylestown							Edisto †				6.88		
Clifton †	102	54	81.6	3.63			Driftwood							Effingham †				4.91		
Edmond							Dubois							Florence †	99	59	80.0	6.45		
Fort Reno †	107	56	81.0	0.66			Duncannon							Gaffney †				1.67		
Fort Will.	106	55	81.8	1.95			Dunmore	103	54	73.4	4.17			Georgetown †	96	68	81.9	4.20		
Hennessey	106	60	85.2	0.88			Dushore	95	46	71.2	3.63			Gillisonville †	108	60	81.4	7.93		
Jefferson	106	54	88.2	1.15			Duberry	94	60	70.2	6.08			Greenville †	97	55	76.8	5.75		
Kekule Falls	108	55	81.7	1.80			East Bloomsbury							Greenwood	100	61	80.4	5.16		
Kingfisher	110	55	88.9	0.48			East Mauch Chunk	100	54	73.6	8.38			Holland	102			5.82		
Mangum †	106	55	80.8	2.28			Easton	94	60	74.4	8.04			Kingtree †	101	62	82.5	4.69		
Norman †	106	55	88.6	2.34			Edinboro †	99	58	72.8				Little Mountain	102	62	80.6	3.44		
Ponca							Ellwood Junction †							Longshore †	98	60	78.6	4.78		
Prudence †	106	56	80.1	1.59			Emporium	95	55	72.6	5.28			Mount Carmel †				4.88		
Sac and Fox Agency †	104	50	80.9	2.70			Everett	89	58	71.6	5.03			Pinopolis †	98	67	77.7	8.49		
Stillwater †	106	51	81.2	2.63			Farrandsville							Port Royal †	101	70	82.2	5.65		
Waukomis	107	54	88.6	2.27			Forks of Neshaminy †	91	64	75.0	12.42			St. George †	99	64	80.5	8.81		
Winnifield †	110	56	84.0	1.54			Franklin	100	58	73.5	5.74			St. Matthews †	101	63	81.2	6.15		
Woodward	100	56	83.8	0.52			Freeport							Santuck †	99	58	79.0	8.80		
Oregon.							Girardville							Shaws Fork †	97	61	80.0	3.83		
Albany a	86	46	65.4	0.97			Grampian	94	50	73.7	7.08			Smith's Mills †				4.69		
Arlington	102	50	71.8	T.			Greensboro †	105	60	79.4	4.42			Society Hill †	96	61	78.4	6.20		
Ashland b	96	40	66.6	T.			Greenville	95	49	70.8	8.16			Spartansburg	99	55	79.0	3.99		
Aurora †	94	54	69.7	0.98			Hallstead †	96	54	72.9	3.89			Statesburg †	100	64	80.2	5.82		
Aurora (near)	86	41	61.9	0.88			Hamburg	101	58	75.8	6.99			Trenton	99	63	80.9	5.97		
Bandon	70	45	58.8	0.89			Hollidaysburg	97	50	73.5	4.07			Trial †	96	58	78.8	7.29		
Bay City †	79	40	58.4	3.69			Honesdale	100	55	74.4	5.84			Wallalla	98	54	76.8	3.88		
Brownsville †	88	60	70.8	0.55			Huntingdon †	95	50	73.8	3.18			Winnabow	98	58	79.0	3.88		
Burns	92	30	59.8	0.75			Huntingdon †							Yemassee †	104	60	82.0	7.57		
Burns (near)	96	36	63.3	0.00			Irwin							Yorkville	99	62	80.2	6.71		
Canyon City	96	39	67.4	0.23			Johnstown †	99	53	74.3	5.27			South Dakota.						
Cascade Locks	94	48	66.6	0.62			Karthaus							Aberdeen †	98	49	71.2	4.81		
Corvallis a	89	42	62.9	0.09			Kearing							Alexandria †	100	47	73.8	4.94		
Dayville †	100	40	65.3	T.			Kennett Square	98	58	74.9	10.16			Armour †	101	48	73.8	3.63		
Falls City							Lansdale							Ashcroft †	107	35	70.2	0.73		
Fife †	92	31	60.2	0.00			Lawrenceville							Brookings †	95	46	71.2	4.23		
Fort Klamath	87	30	57.8	0.03			Lebanon	98	56	75.0	5.89			Canton	98	49	74.4	4.29		
Gardiner	75	47	59.7	0.82			Leroy	95	54	71.9	3.95			Castlewood †	98	41	71.6	7.27		
Glenora	93	38	60.2	1.84			Lewisburg	98	58	74.8	4.72			Centerville	105	60	76.4	3.44		
Government Camp	86	30	51.4	4.14			Lock Haven d †	98	41	74.4	5.68			Chamberlain †	105	60	76.4	3.44		
Grants Pass a †	97	42	66.9	0.00			Lock Haven d							Cross †	94	38	65.0	1.01		
Heppner	100 ^b	41	66.4	0.38			Lock No. 4 †							Doland	103	41	73.6	2.70		

TABLE II.—*Meteorological record of voluntary and other cooperating observers—Continued.*

Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.	
	Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.
<i>South Dakota—Cont'd.</i>	0	0	0	Ins.	Ins.	<i>Texas—Cont'd.</i>	0	0	0	Ins.	Ins.	<i>Utah—Cont'd.</i>	0	0	0	Ins.	Ins.
Howard †	98	48	73.0	5.86		College Station ²	101	.....	85.4	1.45		St. George†	110	49	80.4	0.28	
Kimball†	104	46	74.4	2.26		Columbus†	98	67	83.2	0.41		Sciole†	96	30	68.0	0.43	
Leslie†	104	46	76.7	0.53		Corsicana ^b †	106	64	85.4	0.47		Snowville	94	37	64.8	0.27	
Wellette†	98	47	73.0	3.41		Cuero†	101	67	86.0	0.02		Soldier Summit	98	23	61.0	0.02	
Memo†	102	49	76.6	3.37		Dallas†	105	61	85.6	1.14		Terrace ^c †	108	50	76.6	0.02	
Millbank	96	50	71.4	3.92		Danevang†	102	66	85.1	0.78		Thistle†	97	35	67.2	0.58	
Mitchell†	101	46	75.8	4.05		Dean	108	52	77.2	1.71		Tooele†	97	47	70.4	0.91	
Oelrichs†	106	39	74.0	2.40		Dublint†	104	64	84.9	0.00		Vernal	93	38	68.5	1.08	
Parker†	102	45	74.0	3.34		Duval ^a †	111	77	90.5	0.80		Woodruff	90	30	55.0	0.20	
Parkton†	99	45	72.0	3.76		Emory	107	59	85.0	1.51		<i>Vermont.</i>					
Plankinton†	105	48	75.2	4.18		Estelle†	107	58	85.4	1.08		Brattleboro	96	50	73.0	12.08	
Rosebud	100	38	73.0	2.50		Forestburg†	105	60	82.8	4.22		Burlington†	96	52	74.4	8.48	
Silver City	100	46	73.8	4.45		Fort Clark	106	62	86.2	0.10		Chelsea†	92	52	69.7	10.60	
Siouxfall†	100	51	70.7	0.46		Fort McIntosh	107	69	86.5	0.80		Cornwall	94	50	70.4	12.73	
Tyndall†	101	50	75.4	1.42		Fort Ringgold†	104	66	86.6	0.91		Enosburg Falls	94	44	69.6	7.20	
Watertown	94	44	69.0	5.72		Fort Stockton	107 ^d	64 ^e	87.0 ^f	1.48		Hartland†	91	42	66.4	10.31	
Wentworth†	97	47	72.4	6.34		Fort Worth†	107 ^d	64 ^e	87.0 ^f	0.55		Jacksonville	92	42	71.0	6.40	
Wessington Springs	101	50	73.7	8.88		Fredericksburg ^{*†}	102 ^d	60	85.6 ^d	1.14		St. Johnsbury	93	47	69.0	6.85	
<i>Tennessee.</i>						Fruitland	106	60	85.5	0.84		Stratford ^{*†}	89	49	69.0	6.85	
Andersonville	96	57	75.9	5.39		Gainesvillet	100	60	88.4	7.32		Vernon [*]	95	56	73.5	13.65	
Arlington†	100	58	81.6	5.67		Georgetown	.....	.....	.....	0.17		Well	91	50	71.8	10.07	
Arthur†	100	58	75.0	5.69		Grapevine†	105	58	85.4	0.08		Woodstock	99	45	73.4	6.04	
Ashwood ^{*†}	100	64	80.1	3.00		Hale Center†	101	56	77.6	3.72		<i>Virginia.</i>					
Benton (near)†	100	52	76.8	5.53		Hallettville†	104	65	86.6	0.52		Alexandria	94	59	77.7	4.68	
Bluff City†	100	53	80.4	5.44		Hearne†	105	70	86.8	0.00		Ashtland†	97	57	77.3	4.93	
Bolivar†	100	53	72.9	6.18		Henrietta†	106	65	87.0	1.43		Barboursville	90	56	76.0	4.50	
Bristol†	94	50	72.9	6.18		Hewitt†	.....	.....	.....	T.		Bedford City	96	56	76.3	1.70	
Brownsville†	103	58	83.5	0.40		Houston†	99	70	84.8	2.00		Bigtone Gap†	94	46	71.2	6.78	
Byrdstown	94	52	75.4	7.83		Huntsville†	102	66	86.2	0.30		Birdsneck ^{*†}	91	70	79.6	6.45	
Cagle	95	53	74.2	7.72		Junction City	108	.....	.....	2.01		Blacksburg	94	49	70.9	6.17	
Carthage†	.....	.....	.....	6.35		Kent†	.....	.....	.....	2.28		Buckingham†	94	54	75.8	2.92	
Center Point†	.....	.....	.....	1.01		Kerrville†	.....	.....	.....	0.80		Burkes Garden	88	47	70.4	4.61	
Clinton†	.....	.....	.....	5.39		Lampasas†	108	58	85.4	0.42		Callaville†	94	57	77.4	5.08	
Covington	103	65	88.8	2.86		Langtry†	105	.....	.....	0.00		Christiansburg ^d	97	51	73.7	4.34	
Decatur†	98	54	77.0	6.03		Llano ^a †	108	70	88.8	0.40		Clifton Forge	97	51	73.7	3.78	
Dyersburg	101	58	82.4	2.11		Longview†	108	62	87.2	3.03		Dale Enterprise†	96	48	72.9	4.15	
Elizabethhton†	98	52	75.6	6.02		Lufkin†	108	64	87.4	0.12		Danville†	.....	.....	.....	5.57	
Elk Valley	94	53	75.8	5.69		Luling†	103	67	86.4	0.88		Dowell	98	.....	.....	2.09	
Erasmus	91	46	71.5	10.64		Mann†	111 ^d	68	88.1 ^d	0.43		Dwale	.....	.....	.....	4.09	
Fairmount ^{*†}	90 ^d	61	73.4 ^d	8.60		Marathon	95	49	79.5	0.38		Farmville	102	63	81.7	6.08	
Florence†	100	58	78.3	6.66		Menardville	105	55	81.6	0.00		Fredericksburg†	95	57	77.7	5.04	
Franklin	100	56	78.6	5.02		Midland	104	53	80.6	2.28		Gordonsville	92	68	77.7	.....
Grace	98	53	74.1	3.54		Mount Blanco†	101	48	78.4	3.08		Goshen	.....	.....	.....	7.25	
Greeneville†	98	53	72.8	3.26		New Braunfels†	101	65	84.4	1.19		Grahams Forge	92	47	71.1	4.75	
Harriman	98	52	75.2	10.10		Orange†	95	67	82.2	1.03		Hampton	91	65	79.5	3.37	
Hickory Withe	100	59	82.8	3.26		Paris†	108	60	85.2	2.87		Hot Springs	92	58	75.8	3.26	
Hohenwald†	101	48	77.1	4.20		Point Isabel ^a †	92	78	84.2	0.00		Leesburg	96	56	73.9	2.04	
Jackson†	99	56	80.8	1.73		Rheinland†	105	56	84.6	3.34		Lexington†	90	54	73.9	3.99	
Johnsonville†	100	52	80.0	3.54		Roby†	100	56	81.5	1.39		Maidens	.....	.....	.....	3.72	
Jonesboro ^{*†}	89	61	78.0	5.73		Runge†	104 ^d	69	88.4 ^d	0.00		Manassast	95	56	77.1	4.14	
Kingston†	97	55	78.0	5.93		San Antonio†	104	68	88.9	0.37		Marion†	94	48	78.8	4.97	
Liberty†	97	55	78.1	4.21		Sandersort†	104	49	88.4	0.50		Monterey	88	48	68.7	4.23	
Loudon†	.....	.....	.....	7.60		San Marcos ^b †	103	62	84.0	1.45		Petersburg†	99	59	78.7	2.73	
Lynville†	98	58	78.0	7.85		Sierra Blanca†	97	.....	.....	4.08		Quantico	88	55	77.4	.....
McKenzie†	102	57	81.2	3.26		Stafford†	101	67	86.6	1.88		Richmond (near)†	100	60	79.1	3.74	
McMinnville†	97	55	76.6	9.10		Sulphur Springs†	107	63	86.4	2.24		Rockymount†	95	57	76.9	1.91	
Milan†	104	55	82.6	1.80		Temple a	104	68	86.4	0.30		Salem†	95	61	77.0	3.64	
Molino†	103	58	79.4	4.66		Temple b	104	68	86.6	0.10		Spears Ferry	.....	.....	.....	6.88	
New Market ^{*†}	98	60	75.0	8.52		Tyler†	106	68	86.2	1.16		Spotsylvania†	95	57	78.3	3.99	
Newport†	94	55	76.6	8.50		Valentine†	104	50	77.4	1.60		Stanardsville†	93	54	74.0	7.70	
Nunnelly ^{*†}	98	58	77.7	2.38		Waco†	105	68	86.6	0.23		Stephenson City†	98	57	76.6	4.49	
Oak Hill ^{*†}	98	52	75.6	18.21		Waxahachie†	112	61	87.0	0.40		Sunbeam†	94	60	78.5	4.18	
Palmetto†	100	58	78.4	7.86		Weatherford†	106	63	85.3	0.17		Swords Creek	.....	.....	.....	6.81	
Pope	100	58	79.3	2.42		Wichita Falls†	.....	.....	.....	2.15		Warrenton	91	64	78.4	4.00	
Ridleyton†	97	55	77.3	7.14		<i>Utah.</i>						Warsaw†	94	56	78.3	8.54	
Rogersville†	91	53	78.6	4.31		Alpine City†						Westbrook Farm	97	63	77.2	.....
Rugby	94	49	73.8	6.55		Blue Creek ^a †	102	48	74.4	0.10		Williamsburg	90	60	74.3	.....
St. Joseph†	106	50	79.4	3.14		Brigham City†	.....	.....	.....	1.03		Woodstock†	100	50	76.5	4.88	
Savannah	103	53	81.2	3.46		Castlegate†	98	27	64.1	0.46		Wytheville†	92	53	72.2	3.73	
Sewanee†	91	53	73.6	7.21		Corinne†	98	40	69.7	0.58		<i>Washington.</i>					
Silver Lake	.....	.....	.....	6.98		Croydon†	94	29	68.7	0.40		Aberdeen	78	46	59.5	1.76	
Springdale ^{*†}	98	60	77.4	5.12		Fillmore†	115	35	72.8	0.19		Ashford†	82	36	56.6	3.06	
Springfield ^{*†}	98	60	78.8	3.14		Fort Duchesne†	98	34	67.5	0.17		Blaine†	82	36	56.6	1.63	
Sylvia	101	56	77.0	5.14		Frisco†	101	40	71.5	0.16		Cascade Tunnel	98	38	52.8	0.49	
Tellico Plains†	101	56	76.7	6.71		Giles†	108	47	77.8								

TABLE II.—*Meteorological record of voluntary and other cooperating observers*—Continued.

TABLE III.—*Data from Canadian stations for the month of July, 1897.*

Stations.	Pressure.			Temperature.		Precipitation.		Prevailing direction of wind.	Total depth of snow.
	Mean not reduced.	Mean reduced.	Departure from normal.	Mean.	Departure from normal.	Total.	Departure from normal.		
St. Johns, N. F.	Inches.	Inches.	Inches.	°	°	Inches.	Inches.	w.	
Sydney, C. B. I.	29.79	29.98	-.04	56.8	— 4.2	6.09	.....	sw.	
Grindstone, G. St. L.	29.97	30.08	+.12	64.6	+.31	1.45	— 8.05		
Halifax, N. S.	29.94	30.07	+.15	64.1	+.16	3.65	— 0.60	sw.	
Grand Manan, N. B.	29.96	30.01	+.06	60.4	— 1.8	3.29	— 0.55	w.	
Yarmouth, N. S.	29.98	30.06	+.13	60.8	— 0.8	3.93	— 0.86	s.	
Charlottet' n, P. E. I.	29.97	30.01	+.09	65.0	— 1.0	4.53	— 0.55	sw.	
Chatham, N. B.	29.98	29.98	— .10	66.8	— 5.8	3.82	— 1.38	w.	
Father Point, Que.	29.94	29.97	+.18	57.7	— 0.7	3.14	— 0.08	w.	
Quebec, Que.	29.68	29.95	+.08	67.2	— 2.2	2.85	— 0.11	ne.	
Montreal, Que.	29.73	29.92	+.04	70.6	— 2.1	4.42	— 0.15	sw.	
Rocklife, Ont.	29.40	29.89	+.00	68.6	— 5.6	3.09	— 0.03	se.	
Kingston, Ont.	29.61	29.92	+.08	70.8	— 2.2	4.53	— 1.27	sw.	
Toronto, Ont.	29.54	29.91	— .08	71.2	— 3.7	5.24	— 2.27	w.	
White River, Ont.	28.60	29.90	— .05	67.2	— 5.5	1.49	— 1.88	n.	
Port Stanley, Ont.	29.30	29.92	— .05	70.1	— 2.8	5.16	— 1.61	w.	
Saugeen, Ont.	29.29	29.92	— .01	68.9	— 5.4	3.26	— 1.88	sw.	
Parry Sound, Ont.	29.34	29.91	— .01	70.6	— 5.6	6.92	— 4.49	w.	
Port Arthur, Ont.	29.18	29.86	— .03	64.2	— 0.7	6.53	— 3.53	w.	
Winnipeg, Man.	29.00	29.80	— .09	67.4	— 8.4	5.28	— 2.16	se.	
Minnedosa, Man.	28.99	29.88	— .01	65.4	— 5.9	1.77	— 0.77	nw.	
Qu'Appelle, Assin.	27.63	29.81	— .05	68.0	— 0.0	1.77	— 0.68	s.	
Medicine Hat, Assin.	27.58	29.81	— .08	64.7	— 2.8	1.65	— 0.07	s.	
Swift Cur' t, Assin.	27.84	29.84	— .06	64.5	— 0.0	6.27	— 4.15	w.	
Calgary, Alberta....	26.37	29.83	— .07	57.5	— 1.5	5.54	— 2.96	w.	
Prince Albert, Sask.	29.25	29.79	— .03	60.6	— 1.3	2.35	.....	w.	
Edmonton, Alberta.	27.58	29.87	— .03	58.1	— 2.8	4.19	— 1.09	se.	
Battleford, Sask.	28.12	29.80	.....	61.8	— 2.9	4.67	.....	w.	
Kamloops, B. C. ....	.....	.....	.....	.....	.....	.....	.....
Hamilton, Bermuda	30.01	30.17	+.08	78.4	— 0.3	5.79	.....	s.	
Banff, Alberta.	25.38	29.89	.....	52.6	.....	5.94	.....	sw.	
Eskimault, B. C.	30.04	30.07	.....	56.5	— 3.5	1.00	.....	s.	
Ottawa, Ont.	29.60	29.95	.....	71.2	— 1.7	5.21	.....	s.	
June, 1897.	27.57	29.81	+.02	61.2	— 3.3	5.68	— 2.59	n.	
Medicine Hat, Assin									

Table IV not received.

TABLE V.—*Mean temperature for each hour of seventy-fifth meridian time, July, 1897.*

Stations.	1 a. m.	2 a. m.	3 a. m.	4 a. m.	5 a. m.	6 a. m.	7 a. m.	8 a. m.	9 a. m.	10 a. m.	11 a. m.	Noon.	1 p. m.	2 p. m.	3 p. m.	4 p. m.	5 p. m.	6 p. m.	7 p. m.	8 p. m.	9 p. m.	10 p. m.	11 p. m.	Midnight.	Mean.	
Bismarck, N Dak....	64.4	63.3	62.6	61.5	60.5	59.5	59.4	61.7	63.8	67.5	71.0	74.0	76.3	78.0	79.4	80.5	80.5	79.4	76.5	76.7	74.5	70.7	68.1	66.1	69.9	
Boston, Mass.....	67.5	67.0	66.9	66.6	66.4	66.9	68.5	69.8	71.8	73.2	73.9	74.8	75.3	75.9	74.9	74.9	74.8	74.3	72.6	71.0	70.1	69.4	68.9	68.2	71.0	
Buffalo, N Y.....	69.7	69.4	69.0	68.6	68.5	69.3	70.7	71.3	73.5	75.4	76.5	77.7	78.7	79.3	79.5	78.6	77.7	76.8	75.4	74.9	73.5	72.4	71.5	70.5	73.7	
Chicago, Ill.....	71.8	71.1	70.2	69.8	69.4	69.2	70.5	72.3	73.9	74.9	75.5	77.4	76.5	77.4	77.7	77.9	77.8	77.0	75.1	74.2	73.6	73.1	74.1	73.1	74.1	
Cincinnati, Ohio....	74.2	73.1	73.3	71.8	70.4	69.8	70.4	72.1	74.2	76.9	79.1	81.1	82.7	83.5	84.1	84.7	84.7	84.3	88.0	81.2	80.1	78.6	77.1	75.6	77.7	
Cleveland, Ohio.....	71.1	70.8	69.8	68.9	68.5	68.8	68.9	70.8	73.5	74.6	76.1	76.5	76.4	76.4	76.9	77.7	78.3	78.4	78.4	77.0	75.5	74.5	73.1	71.9	73.8	
Detroit, Mich.....	71.3	70.2	69.2	68.7	68.1	67.7	68.8	71.4	73.6	75.5	77.2	78.5	79.4	80.0	80.4	80.3	80.4	80.5	79.2	77.3	75.2	74.1	73.0	72.0	74.7	
Dodge City, Kans....	72.7	71.3	69.9	69.5	67.9	67.0	66.1	68.5	72.6	77.0	80.3	83.5	86.5	88.3	89.7	90.4	90.1	88.7	86.4	82.8	79.2	76.7	75.0	73.7	73.7	
Eastport, Me.....	54.3	54.1	53.7	53.8	54.1	55.2	56.3	57.8	59.9	60.9	61.6	62.3	62.6	62.6	62.3	61.7	61.2	59.9	57.3	56.7	55.9	55.0	54.9	56.1	56.1	
Galveston, Tex.....	82.2	82.0	81.8	81.5	81.2	80.8	80.7	82.0	82.3	83.7	85.1	86.1	86.6	87.2	87.3	87.3	86.3	85.4	84.3	83.8	82.8	82.6	82.5	83.8	83.8	
Havre, Mont.....	61.3	60.1	58.7	57.4	56.8	54.7	53.8	55.4	59.7	61.8	66.3	68.8	71.2	73.9	74.5	75.6	76.2	76.9	76.0	76.1	74.4	70.8	68.5	68.7	66.1	
Kansas City, Mo....	76.0	74.9	74.1	73.6	72.7	72.0	71.8	73.6	75.8	78.6	81.0	83.4	85.4	86.9	87.7	88.4	88.6	88.5	84.9	84.9	82.5	80.4	78.7	77.4	80.1	
Key West, Fla.....	80.9	80.8	80.9	80.5	80.5	80.5	81.3	82.7	83.6	84.0	84.8	85.6	85.5	85.2	85.1	85.0	84.1	83.6	83.0	82.2	81.6	81.1	81.0	82.8	82.8	
Memphis, Tenn.....	79.9	77.6	76.5	75.7	75.2	74.5	74.6	76.3	78.4	80.3	82.6	84.7	86.4	87.5	88.1	88.8	88.4	88.1	87.4	85.9	83.6	82.5	81.2	80.0	81.8	
New Orleans, La....	70.6	70.1	70.7	70.5	70.2	70.6	70.9	80.3	82.7	84.5	85.9	86.5	87.8	87.0	87.2	86.6	85.4	84.1	82.7	81.7	80.9	80.3	82.9	82.9	82.9	
New York, N. Y.....	69.1	68.7	68.1	67.8	67.4	67.5	68.4	69.9	71.6	73.4	74.8	75.5	75.9	76.6	76.1	74.4	74.2	73.6	73.1	72.5	71.4	70.7	70.4	69.6	71.7	
Philadelphia, Pa....	71.0	70.6	70.2	69.8	69.6	70.0	71.4	73.0	75.2	77.1	78.6	80.2	81.6	82.7	82.5	81.8	81.3	79.1	77.4	75.8	74.0	73.0	72.0	71.5	75.4	
Pittsburg, Pa.....	71.6	70.8	70.3	69.5	68.5	69.9	70.9	72.4	75.8	77.4	79.4	80.6	82.0	82.7	82.4	82.9	83.0	82.8	82.8	79.5	77.4	76.1	75.0	73.8	72.1	76.0
Portland, Oreg.....	63.5	61.9	60.5	59.3	58.2	57.1	56.3	55.7	55.8	57.5	59.0	60.6	62.9	64.8	66.6	68.6	70.7	71.8	72.8	71.9	71.4	70.1	67.7	65.1	63.7	
St. Louis, Mo.....	76.6	75.9	74.9	74.3	73.5	73.9	73.4	75.4	77.7	79.4	81.1	83.4	85.2	86.2	86.9	87.4	87.7	88.9	85.6	84.0	82.1	80.6	79.2	78.2	80.4	
St. Paul, Minn.....	70.6	69.6	68.7	68.0	67.0	66.2	66.4	68.2	70.6	72.8	74.9	76.8	78.3	79.0	80.0	80.1	80.9	80.9	80.0	78.7	76.3	74.1	72.4	71.4	73.8	
Salt Lake City, Utah....	69.4	68.0	67.7	65.7	64.9	64.0	63.7	65.5	65.6	68.9	73.3	75.2	77.6	78.5	80.5	81.3	81.9	82.3	82.5	81.9	79.9	76.4	72.8	71.1	73.1	
San Diego, Cal.....	64.5	64.4	64.1	63.8	63.8	63.8	63.6	63.6	63.8	64.7	66.0	67.7	68.8	69.4	70.0	70.1	70.1	69.9	69.3	68.8	67.8	66.3	65.3	64.8	66.4	
San Francisco, Cal....	54.0	53.7	53.2	53.0	52.6	52.5	52.8	52.5	52.7	53.8	55.4	57.5	59.7	61.4	62.3	63.1	62.8	62.1	60.9	59.0	58.5	56.5	54.9	54.5	56.6	
Savannah, Ga.....	76.7	76.0	75.3	75.0	74.6	74.3	75.7	79.1	82.1	84.5	86.9	87.7	88.2	88.3	87.5	85.8	84.3	83.3	82.3	80.8	79.5	78.8	78.1	77.5	80.9	
Washington, D. C....	71.8	71.1	70.5	69.7	69.4	69.4	71.0	73.5	75.6	77.7	79.7	81.2	83.1	83.5	83.6	83.1	82.3	81.7	79.3	77.4	75.9	74.6	73.5	72.6	76.3	

TABLE VI.—*Mean pressure for each hour of seventy-fifth meridian time, July, 1897.*

Stations.	1 a. m.	2 a. m.	3 a. m.	4 a. m.	5 a. m.	6 a. m.	7 a. m.	8 a. m.	9 a. m.	10 a. m.	11 a. m.	Noon.	1 p. m.	2 p. m.	3 p. m.	4 p. m.	5 p. m.	6 p. m.	7 p. m.	8 p. m.	9 p. m.	10 p. m.	11 p. m.	Midnight.	Mean.	
Bismarck, N. Dak....	28.125	.126	.126	.126	.126	.126	.132	.137	.146	.151	.149	.147	.144	.135	.125	.116	.110	.104	.098	.095	.096	.098	.106	.119	.123	.128
Boston, Mass.....	29.845	.840	.887	.885	.847	.856	.856	.856	.855	.853	.845	.845	.839	.828	.826	.826	.829	.845	.854	.855	.851	.851	.844			
Buffalo, N. Y.....	29.111	.108	.107	.110	.119	.127	.134	.136	.136	.134	.133	.130	.128	.111	.102	.098	.100	.101	.108	.105	.113	.117	.119	.116		
Chicago, Ill.....	29.078	.073	.073	.073	.068	.065	.065	.062	.060	.060	.059	.058	.057	.056	.056	.057	.057	.059	.061	.062	.060	.067	.076	.068		
Cincinnati, Ohio....	29.299	.298	.294	.293	.299	.307	.316	.325	.328	.327	.328	.323	.318	.303	.293	.292	.277	.276	.285	.282	.283	.282	.293	.306	.302	
Cleveland, Ohio....	29.132	.129	.129	.131	.136	.143	.148	.152	.162	.163	.161	.156	.149	.140	.132	.123	.116	.116	.117	.118	.117	.118	.120	.141	.138	
Detroit, Mich.....	29.162	.161	.157	.156	.163	.167	.176	.179	.182	.180	.179	.176	.169	.160	.158	.145	.140	.136	.141	.147	.157	.165	.170	.163		
Dodge City, Kans....	27.390	.391	.386	.385	.381	.386	.397	.406	.414	.417	.415	.409	.402	.391	.376	.369	.349	.338	.340	.350	.361	.376	.385	.381		
Eastport, Me.....	29.908	.905	.904	.908	.914	.919	.925	.930	.934	.935	.932	.929	.923	.917	.913	.908	.904	.906	.911	.914	.918	.920	.919	.917	.917	
Galveston, Tex.....	29.397	.998	.986	.982	.987	.994	.001	.007	.015	.021	.027	.028	.023	.015	.000	.996	.973	.963	.970	.975	.988	.997	.997	.995		
Havre, Mont.....	27.281	.284	.284	.283	.285	.293	.298	.305	.307	.303	.297	.295	.285	.287	.279	.272	.265	.257	.264	.262	.266	.263	.277	.282	.281	
Kansas City, Mo....	28.956	.954	.953	.952	.956	.974	.962	.969	.966	.965	.960	.957	.970	.960	.951	.940	.938	.921	.918	.924	.929	.940	.946	.951	.953	
Key West, Fla.....	30.046	.088	.080	.080	.018	.022	.038	.047	.085	.060	.064	.062	.063	.054	.048	.028	.021	.014	.015	.025	.025	.046	.054	.058	.065	
Memphis, Tenn.....	29.578	.574	.566	.565	.567	.574	.583	.595	.611	.616	.618	.620	.609	.598	.579	.565	.562	.544	.548	.556	.567	.573	.576	.578		
New Orleans, La....	29.957	.953	.950	.951	.957	.968	.981	.994	.999	.000	.997	.992	.980	.970	.957	.944	.938	.929	.938	.941	.948	.958	.963	.963	.963	
New York, N. Y.....	29.640	.635	.635	.637	.641	.648	.656	.662	.668	.662	.660	.655	.648	.640	.630	.625	.627	.632	.637	.647	.651	.651	.649	.644	.644	
Philadelphia, Pa....	29.844	.840	.849	.843																						

TABLE VII.—Average wind movement for each hour of seventy-fifth meridian time, July, 1897.

Stations.	Mean.																								
	1 a. m.	2 a. m.	3 a. m.	4 a. m.	5 a. m.	6 a. m.	7 a. m.	8 a. m.	9 a. m.	10 a. m.	11 a. m.	Noon.	1 p. m.	2 p. m.	3 p. m.	4 p. m.	5 p. m.	6 p. m.	7 p. m.	8 p. m.	9 p. m.	10 p. m.	11 p. m.	Midnight.	
Abilene, Tex.	7.8	7.6	7.9	8.1	8.0	7.5	7.6	8.2	10.2	10.8	10.9	11.5	10.1	9.6	10.2	10.5	10.6	10.4	10.1	8.4	7.6	7.8	7.9	9.0	
Albany, N. Y.	4.5	4.4	4.5	4.7	4.6	4.0	5.2	5.2	6.2	6.8	7.5	8.3	8.7	9.2	8.9	8.6	8.5	8.6	8.5	5.6	5.3	5.1	5.0	6.1	
Alpena, Mich.	5.3	5.3	5.4	5.1	5.6	6.1	6.5	6.5	7.5	8.2	9.5	9.9	11.0	11.0	11.3	11.3	11.8	11.3	10.0	8.5	7.5	5.8	5.4	7.7	
Amarillo, Tex.	14.8	14.5	13.9	14.1	14.8	18.8	14.0	12.2	12.7	14.7	15.1	14.5	14.5	14.8	14.2	14.6	16.0	17.0	17.7	18.4	17.4	15.7	14.8	15.1	
Atlanta, Ga.	6.8	7.5	6.8	6.9	6.6	6.8	6.2	5.9	6.1	7.2	7.9	8.5	8.3	9.0	9.4	8.2	7.1	6.6	6.2	6.6	7.3	7.2	7.4	7.4	
Atlantic City, N. J.	7.4	7.6	7.3	6.7	6.8	6.6	7.7	8.6	9.0	9.3	9.6	10.0	10.4	10.9	11.3	10.8	9.8	10.0	8.6	8.1	8.0	7.7	7.7	7.0	
Augusta, Ga.	8.2	8.4	8.1	2.9	2.8	2.8	2.9	3.5	4.3	4.6	4.9	5.5	6.8	7.8	7.4	7.7	7.5	7.2	6.5	5.5	4.6	4.0	3.6	3.8	4.8
Baker City, Oreg.	4.0	8.9	8.9	4.9	5.9	6.8	7.1	7.2	6.8	5.0	3.4	3.8	4.5	5.4	6.2	7.2	7.6	8.1	8.0	8.2	7.6	6.3	4.9	4.4	5.9
Baltimore, Md.	2.8	3.4	3.0	3.5	3.5	3.5	3.6	4.4	5.1	5.7	5.9	6.5	6.9	7.4	7.1	7.6	7.8	5.9	4.8	4.0	3.8	3.2	2.9	2.9	4.8
Bismarck, N. Dak.	7.1	6.0	7.0	6.6	6.3	6.6	6.4	6.0	6.8	7.9	8.4	9.1	10.3	10.8	11.3	11.1	10.7	10.8	10.7	9.2	7.7	7.9	7.8	8.5	
Block Island, R. I.	12.8	12.8	12.7	13.2	18.2	12.8	18.0	9.0	14.3	14.8	15.0	15.2	15.5	15.6	15.1	15.9	15.4	15.2	14.5	14.4	14.0	14.1	13.5	12.9	14.2
Boston, Mass.	8.7	9.8	9.1	9.3	9.4	9.0	9.8	10.8	11.8	12.5	12.0	12.5	12.8	13.4	12.9	12.0	11.6	11.6	10.7	10.2	10.0	9.8	10.0	9.2	10.7
Buffalo, N. Y.	11.8	11.8	10.5	10.7	10.1	9.9	9.5	10.2	11.3	11.7	12.3	12.3	13.2	13.0	13.2	13.0	13.9	13.8	12.6	10.4	10.0	10.3	10.6	11.9	11.5
Cairo, Ill.	4.8	4.7	5.0	4.8	4.6	4.8	4.7	5.3	5.9	6.8	6.6	6.7	7.5	7.9	7.7	7.7	7.4	6.9	6.7	6.2	5.0	5.1	5.5	5.9	5.4
Cape Henry, Va.	7.5	7.5	8.3	7.5	7.5	6.8	7.7	8.5	8.4	9.1	10.0	10.2	10.6	10.6	11.1	11.0	10.4	9.7	9.2	8.7	8.5	8.5	9.0	9.0	
Carson City, Nev.	5.9	5.2	4.7	3.8	3.1	2.3	2.1	2.1	2.8	3.7	4.0	5.4	5.4	7.6	8.9	11.0	12.7	13.8	13.6	12.5	10.9	9.1	7.0	6.9	
Charleston, S. C.	7.8	6.6	6.8	6.0	6.2	6.7	6.9	7.0	7.1	8.0	8.6	9.0	10.5	11.8	11.5	10.6	9.7	8.9	7.7	7.0	7.1	7.3	8.4	8.4	
Charlotte, N. C.	8.5	8.1	3.3	3.6	3.8	3.5	2.9	3.7	4.4	4.7	4.6	5.4	5.6	5.5	6.3	6.7	5.7	6.3	4.4	3.6	3.7	4.0	3.9	4.4	4.4
Chattanooga, Tenn.	8.7	3.9	4.2	3.7	4.1	4.2	4.1	4.2	4.6	4.8	5.0	6.2	7.0	7.9	8.2	9.5	8.6	8.7	8.0	7.4	5.7	5.9	5.9	5.9	5.9
Cheyenne, Wyo.	6.7	7.0	6.8	6.4	7.1	6.7	6.5	6.5	7.0	7.8	9.3	10.5	12.1	12.0	11.8	11.7	11.1	9.9	9.5	9.4	8.5	8.9	7.8	8.8	
Chicago, Ill.	13.2	12.6	12.4	11.4	10.7	11.1	11.6	12.4	12.8	13.9	12.6	13.2	14.5	15.3	16.0	16.4	16.1	15.3	15.2	13.9	13.2	13.5	12.6	12.3	
Cincinnati, Ohio.	4.6	4.5	4.5	4.0	4.5	3.8	4.7	4.1	5.3	5.8	6.6	6.9	7.6	8.5	9.3	9.5	9.4	9.1	8.5	7.4	5.7	5.1	4.7	4.6	5.4
Cleveland, Ohio.	10.2	10.2	10.7	10.2	10.0	9.8	9.7	9.5	9.7	10.2	10.9	11.5	12.7	12.4	13.2	13.2	12.0	10.6	10.8	9.8	9.9	10.1	10.2	10.3	
Columbia, Mo.	5.8	5.4	5.8	6.0	5.4	4.9	5.4	5.4	5.9	6.7	7.2	7.5	8.1	8.1	8.2	8.4	8.0	7.8	6.8	5.2	5.1	5.7	5.5	5.7	
Columbus, Ohio.	4.2	3.8	3.7	4.0	3.8	3.9	3.6	4.0	4.8	5.5	6.1	6.8	7.5	7.9	8.5	9.2	8.1	7.7	7.5	5.4	5.4	4.9	4.2	5.7	
Concordia, Kans.	6.2	6.0	6.1	5.5	5.0	5.4	5.6	6.2	6.8	7.7	8.2	9.0	9.0	9.3	9.8	9.0	8.8	8.4	7.5	5.0	5.7	7.0	7.1	7.1	
Corpus Christi, Tex.	12.0	10.0	8.3	7.2	6.6	5.5	4.8	4.8	7.0	8.9	9.9	11.8	15.1	16.5	17.9	18.5	18.6	18.6	17.9	17.1	15.9	14.4	13.8	12.5	
Davenport, Iowa.	4.7	4.7	4.5	4.3	4.6	4.3	5.1	5.5	6.2	7.1	8.1	8.7	9.4	9.3	9.1	9.8	9.4	9.1	8.6	7.1	5.2	5.0	5.1	4.6	
Denver, Colo.	7.6	7.8	7.2	6.7	6.9	7.1	7.3	6.6	6.6	7.0	6.6	7.2	7.4	7.6	8.1	9.1	10.4	10.4	8.7	8.1	7.0	6.8	7.4	7.6	
Des Moines, Iowa.	5.7	5.1	5.4	5.4	5.6	5.2	5.3	6.1	6.9	7.9	9.2	10.5	10.0	10.3	11.8	10.8	10.5	9.7	8.0	6.4	6.0	5.8	5.6	7.6	
Detroit, Mich.	5.8	6.1	6.8	5.8	5.9	6.3	6.6	7.3	7.7	8.1	9.3	10.2	10.8	10.3	10.7	10.5	10.2	9.3	8.0	6.5	6.1	5.6	5.7	7.5	
Dodge City, Kans.	11.4	10.7	10.3	8.9	6.8	6.8	6.9	7.3	9.8	12.5	14.3	15.8	15.1	15.5	16.1	16.2	16.7	16.0	16.1	14.8	13.2	10.5	11.2	12.2	
Dubuque, Iowa.	4.3	3.9	4.1	3.5	3.5	3.7	3.6	4.9	6.4	7.0	8.3	8.4	8.4	8.5	8.5	8.2	7.6	6.5	5.8	4.9	4.7	5.9	5.9	5.9	
Duluth, Minn.	7.2	8.0	7.4	7.5	7.0	7.3	7.7	6.8	7.8	7.7	8.3	10.1	10.8	10.0	10.0	10.1	9.2	8.6	8.3	7.0	6.8	6.5	6.5	7.9	
Eastport, Me.	7.1	6.9	6.9	7.0	6.6	7.0	7.2	8.2	7.9	9.2	10.1	11.0	11.7	11.5	10.0	9.1	8.6	8.2	8.3	8.4	8.4	7.8	7.8		
El Paso, Tex.	8.7	8.8	8.9	10.1	10.4	9.7	9.6	8.8	8.0	8.5	8.7	9.5	9.9	10.5	10.5	10.5	10.4	10.9	10.7	11.6	12.2	10.7	9.4	9.8	
Erie, Pa.	8.8	9.0	8.7	9.0	9.3	8.8	8.6	9.5	9.7	10.4	10.5	10.1	10.8	10.6	10.4	9.7	9.1	8.5	7.5	7.9	8.5	8.9	9.5	9.8	
Eureka, Cal.	6.3	6.2	5.5	4.8	4.2	4.3	4.0	4.5	4.4	4.4	5.2	5.4	5.2	5.2	5.8	12.3	13.2	13.2	13.9	12.5	11.6	10.1	9.5	8.8	
Fort Canby, Wash.	9.7	8.7	8.6	8.3	8.0	8.7	8.3	8.1	8.0	8.5	8.3	8.8	9.0	9.0	10.7	10.9	11.6	11.3	11.2	10.7	10.1	9.9	9.5	9.5	
Fort Smith, Ark.	8.7	8.6	8.2	8.3	8.8	4.5	4.5	4.4	4.4	5.5	5.4	5.8	6.8	6.5	6.9	7.5	7.8	7.1	5.6	4.6	4.2	3.5	3.8	5.2	
Fresno, Cal.	10.5	10.2	9.7	8.8	8.0	6.7	6.2	4.4	4.0	4.0	3.1	3.8	4.2	4.9	4.9	4.8	4.8	5.1	5.5	5.6	6.6	7.2	8.7	9.5	
Galveston, Tex.	9.0	9.0	9.0	8.5	7.8	7.3	6.0	6.4	7.7	8.3	8.8	9.5	10.5	10.9	12.0	12.5	12.8	12.8	10.9	11.0	10.1	9.7	9.6	9.5	
Grand Haven, Mich.	6.0	5.9	5.6	6.4	6.8	6.0	5.9	6.5	7.8	8.4	9.8	9.8	10.5	11.3	11.6	11.0	10.2	9.0	8.0	6.5	5.7	5.7	7.7		
Green Bay, Wis.	5.0	5.4	5.8	4.7	4.4	4.5	4.7	5.4	5.6	6.5	7.1	7.4	8.2	8.8	9.0	9.1	8.9	8.8	8.1	7.5	6.0	5.5	5.3	5.3	
Hannibal, Mo.	5.7	5.2	5.6	6.2	5.9	5.8	5.5	7.0	7.8	8.7	9.6	10.0	10.3	9.8	9.9	9.7	9.8	9.8	9.1	8.1	5.1	5.6	6.6	7.2	
Harrisburg, Pa.	4.7	4.6	4.6	4.5	4.3	4.3	4.2	5.5	6.2	6.8	7.1	7.9	8.2	8.7	8.9	8.8	8.1	7.7	7.0	5.9	4.9	4.5	6.3		
Hatteras, N. C.	8.5	8.7	9.0	8.2	8.2	7.6	7.5	8.5	8.8	8.3	8.6	9.6	10.5	10.5	11.0	11.1	11.5	10.8	10.8	9.6	9.3	9.4	9.8		
Havre, Mont.	6.3	5.5	6.5	7.6	7.8	7.3	7.0	8.5	8.5	9.2	11.0	12.8	12.6	13.7	13.8	13.6	13.0	12.0	11.0	11.1	10.8	9.7	9.7		
Helena, Mont.	9.2	8.9	8.8	7.9	6.7	6.6	6.1	5.4	5.4	5.6	6.5	7.2	7.7	8.9	9.4	9.2	9.8	10.4	10.4	9.5	9.4	8.6	8.0		
Huron, S. Dak.	9.8	10.1	10.7	11.3	10.5	9.1	9.0	10.5	12.6	13.9	14.0	14.5	15.0	15.3	14.6	14.0	13.5	12.4	12.4	10.5	9.9	9.5	12.0		
Idaho Falls, Idaho	9.6	8.9	7.7	8.5	8.8	7.8	8.5	8.8	9.0	10.7	11.8	12.0	13.0	14.0	15.0	16.1	15.8	15.8	16.1	17.6	17.9	16.6	10.7	12.0	
Indianapolis, Ind.	6.8	6.8	6.7	6.0	6.1	5.5	6.1	7.3	7.7	8.5	8.8	9.5	10.5	10.5	11.2	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	
Jacksonville, Fla.	5.6	5.9	5.7	5.7	5.7	5.3	5.9	6.4	7.2	7.3	7.9	8.5	9.8	10.5	11.3	11.6	11.0	10.2	10.2	9.1	8.2	8.4	8.1	7.1	
Jupiter, Fla.	6.2	5.6	5.5	5.3	4.6	4.7	5.0	5.4	6.4	7.4	8.2	9.8	10.0	10.5	10.0	10.7	10.5	9.2	8.7	7.0	6.6				

TABLE VII.—*Average wind movement, etc.—Continued.*

Stations.	1 a. m.	2 a. m.	3 a. m.	4 a. m.	5 a. m.	6 a. m.	7 a. m.	8 a. m.	9 a. m.	10 a. m.	11 a. m.	Noon.	1 p. m.	2 p. m.	3 p. m.	4 p. m.	5 p. m.	6 p. m.	7 p. m.	8 p. m.	9 p. m.	10 p. m.	11 p. m.	Midnight.	Mean.	
Pensacola, Fla.	5.8	6.0	6.1	6.0	6.1	6.4	5.5	6.2	6.9	7.4	7.7	8.3	9.1	11.7	12.2	12.6	12.5	12.0	11.1	9.5	7.1	6.4	6.0	5.5	8.1	
Philadelphia, Pa.	6.7	7.2	6.8	6.6	6.8	6.2	7.3	7.9	7.8	8.2	9.1	9.2	9.9	10.5	10.9	11.1	11.4	10.6	8.8	8.1	8.3	7.9	7.7	7.1	8.4	
Phoenix, Ariz.	4.4	5.0	5.0	4.6	8.7	4.0	8.8	3.4	4.1	4.3	4.4	5.0	5.0	5.1	4.9	5.8	6.4	6.8	6.8	6.5	5.8	4.7	4.8	4.5	4.9	
Pierre, S. Dak.	8.9	7.2	6.1	6.4	6.7	6.9	6.8	5.7	6.0	7.7	8.9	9.3	9.6	10.1	10.2	10.9	10.3	10.4	10.8	11.1	11.0	10.0	9.1	8.7	8.7	
Pittsburg, Pa.	3.8	3.6	3.2	3.8	3.5	3.5	3.8	4.6	5.0	5.8	6.5	6.6	7.0	7.6	8.0	7.8	7.6	7.5	6.6	6.1	5.1	4.7	4.6	5.0	5.4	
Port Angeles, Wash.	7.5	6.4	5.6	5.7	5.2	5.1	5.1	5.1	4.5	3.7	5.1	6.2	7.5	8.4	9.1	9.5	10.7	11.5	12.8	13.9	13.3	11.8	9.1	7.8	7.9	
Port Huron, Mich.	7.1	6.4	6.8	6.6	6.5	6.6	6.7	7.5	7.5	8.9	9.4	10.1	10.0	11.2	11.6	11.0	10.4	9.9	8.9	8.8	6.2	6.4	6.7	6.9	8.2	
Portland, Me.	4.8	4.5	4.7	5.1	4.9	5.0	6.0	6.4	7.6	8.0	10.1	10.3	10.8	10.8	10.6	9.5	8.5	6.9	5.8	5.5	5.1	4.6	6.9	6.9	6.9	
Portland, Oreg.	9.2	8.8	6.7	6.0	5.5	5.0	4.9	4.7	4.7	5.4	7.1	8.4	8.4	8.8	8.9	9.4	9.1	9.5	11.2	12.0	11.3	10.8	9.8	8.0	8.0	
Pueblo, Colo.	6.3	6.7	6.8	6.3	5.5	4.8	4.3	4.2	3.9	4.0	4.8	5.3	6.7	7.5	8.3	9.4	10.4	10.9	11.3	10.1	8.8	7.5	7.0	7.3	7.3	
Raleigh, N. C.	3.2	3.7	3.4	3.6	3.5	3.0	3.1	4.0	4.8	5.5	5.3	5.5	5.8	6.4	6.6	6.8	6.0	5.2	4.4	3.7	3.9	3.8	3.8	4.5	4.5	
Rapid City, S. Dak.	6.2	6.6	6.4	6.2	6.5	6.2	5.6	5.6	5.8	6.3	8.4	9.7	11.7	12.7	12.4	11.7	11.4	10.2	10.0	8.5	7.6	5.7	5.1	5.7	8.0	
Redbluff, Cal.	7.6	6.8	6.1	5.9	6.0	5.7	5.2	5.7	5.4	5.9	7.2	7.4	7.6	7.0	6.7	6.8	7.1	7.4	7.3	7.2	7.5	7.2	7.2	6.7	6.7	
Rochester, N. Y.	5.2	5.1	5.3	5.3	5.4	5.5	5.5	5.9	6.3	6.3	6.4	6.9	7.5	7.4	8.0	8.3	8.0	6.7	5.9	5.4	4.8	4.7	4.9	6.0	6.0	
Roseburg, Oreg.	8.8	2.9	2.5	2.3	2.0	2.1	2.3	2.0	2.3	2.5	3.5	4.4	4.6	5.0	5.9	7.3	7.7	9.2	9.5	10.1	10.5	9.7	7.8	5.4	5.2	
Sacramento, Cal.	9.5	9.8	9.3	9.4	9.8	9.1	9.8	8.9	8.5	7.6	7.8	7.4	7.9	8.0	8.0	8.5	8.5	8.8	9.5	9.9	9.6	9.6	9.3	8.9	8.9	
St. Louis, Mo.	7.2	7.1	7.6	6.8	6.9	6.6	6.8	6.6	7.2	8.8	8.8	9.8	10.8	10.4	10.3	10.8	10.7	9.5	8.5	8.5	7.5	7.4	7.0	7.4	8.3	
St. Paul, Minn.	6.4	6.7	6.0	5.9	5.9	5.4	5.3	6.2	7.1	7.8	7.8	8.4	9.1	9.5	9.9	10.8	10.0	9.2	8.4	7.9	6.9	5.7	5.7	6.2	7.4	
Salt Lake City, Utah.	5.5	5.0	5.0	5.1	5.1	4.4	4.2	4.5	4.0	3.9	4.7	5.5	7.6	8.6	8.9	8.7	9.4	9.4	8.6	7.7	6.6	6.7	5.7	6.3	6.3	
San Antonio, Tex.	9.7	8.2	6.6	5.0	5.0	4.3	4.4	4.4	5.6	6.8	7.5	7.4	8.0	9.0	9.7	10.1	10.7	10.9	11.4	12.3	12.5	12.4	11.2	8.5	8.5	
San Diego, Cal.	8.0	2.7	2.7	2.8	2.8	2.7	3.0	3.1	8.2	3.5	4.2	5.9	7.7	9.1	10.2	10.8	10.7	10.1	9.6	8.9	7.9	6.6	5.5	4.0	5.8	
Sandusky, Ohio.	5.8	5.6	6.1	5.7	5.8	5.6	5.6	6.1	6.5	7.0	7.7	8.0	8.5	9.0	9.6	9.8	9.8	8.8	7.0	6.8	5.9	5.7	5.8	6.9	6.9	
San Francisco, Cal.	13.2	11.7	11.5	9.9	9.3	8.7	8.8	8.4	7.6	7.6	8.1	8.2	9.5	12.5	15.9	18.9	21.6	23.6	25.5	25.4	23.7	20.7	18.2	14.5	14.8	14.8
San Luis Obispo, Cal.	3.1	2.5	2.3	2.3	2.2	2.2	2.8	2.5	2.8	3.0	3.1	3.2	4.8	5.8	6.2	6.6	6.7	6.7	6.4	5.8	5.4	4.3	3.5	3.1	4.1	4.1
Santa Fe, N. Mex.	5.6	5.9	4.9	4.1	3.2	3.9	3.2	3.5	3.0	3.5	4.1	5.2	6.7	6.4	7.6	8.3	8.6	8.7	8.0	6.3	6.1	5.8	5.8	5.8	5.8	
Sault Ste Marie, Mich.	4.6	4.8	5.0	4.6	4.5	4.7	5.1	5.5	6.1	7.6	7.9	8.3	9.7	10.5	11.2	11.8	11.0	9.7	8.1	6.6	6.1	5.7	5.3	4.9	7.0	
Savannah, Ga.	4.8	5.1	4.7	4.4	4.4	4.2	4.9	6.1	6.8	6.5	6.4	7.0	7.9	9.5	10.0	10.3	9.2	7.8	6.2	5.5	4.7	4.5	4.3	6.4	6.4	
Seattle, Wash.	4.4	3.9	3.7	3.8	3.7	3.5	3.6	3.5	3.4	3.5	4.3	4.5	5.1	5.4	5.9	6.0	6.5	6.3	6.8	7.0	6.9	6.5	5.8	5.0	5.0	
Shreveport, La.	5.9	5.8	4.7	3.9	4.1	4.0	4.0	4.8	5.7	7.1	6.6	6.1	6.0	6.2	6.1	6.5	6.8	7.1	6.6	6.0	4.9	5.2	5.7	6.0	5.6	
Sioux City, Iowa.	11.2	10.9	10.2	10.0	9.5	9.8	10.2	10.1	10.9	12.5	13.7	14.7	16.1	16.2	17.0	17.0	16.9	16.0	14.8	13.1	12.4	12.5	11.2	11.3	12.8	
Spokane, Wash.	4.8	4.1	4.0	4.1	4.8	5.1	5.6	6.2	6.8	7.8	8.2	8.1	8.6	9.4	9.4	9.8	9.6	9.4	9.0	8.6	8.2	6.1	5.4	5.7	7.0	
Springfield, Ill.	6.9	6.8	6.1	6.0	6.8	5.6	6.1	7.0	7.4	8.1	9.2	9.4	9.4	9.7	9.7	10.0	10.5	9.1	8.1	6.8	5.8	5.9	6.2	7.6	7.6	
Springfield, Mo.	8.0	7.3	7.4	7.3	7.4	7.6	8.0	7.6	6.4	9.8	10.5	10.6	10.5	9.7	9.7	10.0	9.4	9.7	8.3	7.0	6.7	7.2	7.3	7.5	8.4	
Tacoma, Wash.	7.0	5.6	4.7	4.5	4.6	4.9	4.2	4.2	3.8	4.5	5.6	6.2	6.9	7.6	7.7	7.9	8.2	8.0	8.5	8.6	8.6	7.8	7.4	6.4	6.4	
Tampa, Fla.	3.7	3.7	3.6	3.4	3.8	3.0	3.7	4.5	5.4	6.2	6.5	6.2	7.8	8.4	8.5	8.5	8.7	7.4	6.8	5.7	4.4	3.7	2.9	5.4	5.4	
Tatoosh Island, Wash.	7.6	7.6	7.6	7.8	7.8	7.1	6.8	7.4	7.7	7.8	7.7	7.4	7.6	8.3	8.7	8.7	9.8	9.6	9.0	9.1	8.5	8.5	8.3	7.6	8.1	
Toledo, Ohio.	6.3	6.3	6.1	5.8	5.9	6.3	6.4	6.5	7.4	7.6	8.6	8.6	9.9	10.0	10.2	10.8	10.5	11.0	9.9	8.4	6.7	6.5	6.1	6.0	5.7	7.7
Vicksburg, Miss.	4.9	5.4	5.5	5.8	5.8	5.6	5.1	5.4	5.8	5.6	6.0	6.5	6.4	6.9	7.4	7.6	7.3	6.9	6.6	5.8	5.6	5.0	4.7	4.9	5.9	
Vineyard Haven, Mass.	7.8	7.5	7.4	7.8	7.7	7.7	8.9	9.2	10.2	10.9	10.8	10.6	10.4	10.9	10.8	10.5	9.7	9.0	8.5	8.1	8.3	8.4	8.2	9.1	9.1	
Walla Walla, Wash.	7.0	7.0	6.5	6.0	6.1	5.8	5.8	5.9	5.7	6.0	7.4	7.7	7.7	7.9	7.5	7.9	8.3	7.8	7.4	7.0	6.0	5.1	6.0	6.8	6.8	
Washington, D. C.	8.6	8.5	8.5	8.4	8.8	8.8	4.1	5.1	6.0	6.9	6.7	7.4	7.8	8.4	8.0	7.8	7.2	6.5	6.0	4.9	4.5	4.0	4.2	3.8	5.4	
Wichita, Kans.	6.8	6.5	6.5	5.8	6.1	5.9	5.7	5.9	6.8	8.1	8.5	9.8	10.0	10.6	11.0	10.8	10.7	10.4	10.4	9.5	8.6	8.3	7.6	7.1	8.2	
Williston, N. Dak.	4.7	4.5	4.6	4.9	5.5	4.5	4.7	4.7	5.0	6.9	9.2	9.5	8.9	10.0	11.4	11.9	11.3	11.8	11.8	12.2	10.0	7.5	7.5	6.8	7.9	
Wilmington, N. C.	4.6	4.3	4.1	4.2	4.2	4.1	3.9	4.9	5.4	6.0	7.2	8.0	8.9	9.7	10.0	10.0	9.2	8.8	7.8	6.2	5.4	4.9	5.1	4.7	6.8	
Woods Hole, Mass.	12.2	11.0	11.1	10.2	10.8	10.5	10.9	12.6	18.4	14.2	14.8	13.9	15.1	15.5	16.1	14.8	14.1	13.0	12.7	12.6	12.6	13.0	12.8	13.0		
Yankton, S. Dak.	7.0	6.2	5.8	5.8	5.6	5.4	5.7	6.2	7.0	9.3	10.2	11.0	11.6	12.2	13.1	12.7	12.8	11.8	10.8	8.4	6.4	5.9	6.1	6.8	8.4	

TABLE VIII.—Resultant winds from observations at 8 a. m. and 8 p. m., daily, during the month of July, 1897.

Stations.	Component direction from—				Resultant.		Stations.	Component direction from—				Resultant.	
	N.	S.	E.	W.	Direction from—	Dura-tion.		N.	S.	E.	W.	Direction from—	Dura-tion.
<i>New England.</i>													
Eastport, Me.	Hours.	Hours.	Hours.	Hours.	o	Hours.	Upper Lake Region—Cont'd.	Hours.	Hours.	Hours.	Hours.	o	Hours.
Portland, Me.	10	36	11	9	s. 4 e.	26	Greenbay, Wis.	16	29	15	17	s. 9 w.	18
Northfield, Vt.	10	29	22	13	s. 25 e.	21	Duluth, Minn.	23	6	19	18	n. 2 e.	27
Boston, Mass.	11	45	7	6	s. 2 e.	34	North Dakota.	22	20	23	18	n. 68 e.	5
Nantucket, Mass.	11	24	14	25	s. 40 w.	17	Moorhead, Minn.	21	19	19	18	n. 72 e.	6
Woods Hole, Mass.	6	33	9	29	s. 34 w.	36	Bismarck, N. Dak.	23	16	15	19	n. 18 w.	13
Block Island, R. I.	7	23	12	36	s. 40 w.	92	Williston, N. Dak.						
New Haven, Conn.	14	27	15	22	s. 28 w.	15	Upper Mississippi Valley.						
<i>Middle Atlantic States.</i>							St. Paul, Minn.	14	33	12	18	s. 18 w.	19
Albany, N. Y.	10	38	10	9	s. 2 e.	28	La Crosse, Wis. †	6	20	6	6	s.	14
Binghamton, N. Y. †	6	8	16	8	s. 76 e.	8	Davenport, Iowa.	17	16	21	22	n. 45 w.	1
New York, N. Y.	11	29	15	17	s. 6 w.	18	Des Moines, Iowa.	16	24	22	18	s. 27 e.	9
Harrisburg, Pa.	9	23	21	18	s. 12 e.	14	Dubuque, Iowa.	12	22	20	21	s. 6 w.	10
Philadelphia, Pa.	11	25	19	20	s. 4 w.	4	Keokuk, Iowa.	10	32	15	21	s. 15 w.	23
Atlantic City, N. J.	7	27	19	25	s. 17 w.	21	Cairo, Ill.	16	27	14	18	s. 20 w.	12
Baltimore, Md.	11	23	19	22	s. 14 w.	13	Springfield, Ill.	13	31	11	19	s. 24 w.	20
Washington, D. C.	13	29	14	17	s. 11 w.	16	Hannibal, Mo. †	5	14	9	12	s. 18 w.	10
Lynchburg, Va.	15	19	18	24	s. 56 w.	7	St. Louis, Mo.	15	24	16	18	s. 13 w.	9
Norfolk, Va.	11	33	21	15	s. 15 e.	23	<i>Missouri Valley.</i>						
<i>South Atlantic States.</i>							Columbia, Mo. *	6	15	10	9	s. 6 e.	9
Charlotte, N. C.	8	33	27	10	s. 34 e.	30	Kansas City, Mo.	21	25	28	6	s. 80 e.	23
Hatteras, N. C.	5	35	16	19	s. 6 w.	30	Springfield, Mo.	15	31	13	16	s. 9 w.	18
Kittyhawk, N. C.	12	27	20	16	s. 15 e.	16	Lincoln, Nebr.	18	29	20	9	s. 48 e.	15
Raleigh, N. C.	19	22	12	18	s. 63 w.	7	Omaha, Nebr.	19	27	24	8	s. 68 e.	18
Wilmington, N. C.	13	23	17	21	s. 15 w.	16	Sioux City, Iowa.	10	14	6	7	s. 14 w.	4
Charleston, S. C.	11	31	15	26	s. 40 w.	17	Pierre, S. Dak.	24	16	26	10	n. 63 e.	18
Augusta, Ga.	12	31	17	15	s. 14 e.	8	Huron, S. Dak.	26	23	20	14	n. 56 e.	7
Savannah, Ga.	9	28	14	25	s. 30 w.	23	Yankton, S. Dak.	19	12	19	14	n. 56 e.	9
Jacksonville, Fla.	14	25	22	20	s. 10 e.	11	<i>Northern Slope.</i>						
<i>Florida Peninsula.</i>							Havre, Mont.	12	17	6	44	s. 83 w.	38
Jupiter, Fla.	2	36	16	19	s. 5 w.	34	Miles City, Mont.	23	17	12	25	n. 65 w.	14
Key West, Fla.	4	22	35	15	s. 48 e.	27	Helena, Mont.	9	29	2	39	s. 62 w.	42
Tampa, Fla.	14	14	26	21	e.	5	Rapid City, S. Dak.	20	13	17	29	n. 60 w.	14
<i>Eastern Gulf States.</i>							Cheyenne, Wyo.	28	12	3	30	n. 59 w.	31
Atlanta, Ga.	19	18	15	28	n. 65 w.	14	Lander, Wyo.	15	20	19	27	s. 58 w.	9
Pensacola, Fla.	18	22	11	32	s. 75 w.	21	North Platte, Nebr.	17	23	17	19	s. 18 w.	6
Mobile, Ala.	25	18	5	25	s. 71 w.	6	<i>Middle Slope.</i>						
Montgomery, Ala.	18	23	16	19	s. 31 w.	6	Denver, Colo.	15	33	10	13	s. 9 w.	18
Vicksburg, Miss.	12	27	17	23	s. 22 w.	23	Pueblo, Colo.	25	12	13	27	n. 47 w.	19
New Orleans, La.	10	28	11	25	s. 38 w.	23	Concordia, Kans.	11	37	14	9	s. 11 e.	26
<i>Western Gulf States.</i>							Dodge City, Kans.	12	40	10	10	s. 16 w.	26
Shreveport, La.	8	39	18	11	s. 4 e.	31	Wichita, Kans.	16	33	16	9	s. 22 e.	18
Fort Smith, Ark.	13	15	31	12	s. 84 e.	19	Oklahoma, Okla.	10	43	14	3	s. 18 e.	35
Little Rock, Ark.	14	36	13	20	s. 18 w.	23	<i>Southern Slope.</i>						
Corpus Christi, Tex.	2	43	28	3	s. 31 e.	48	Abilene, Tex.	9	37	20	12	s. 16 e.	29
Galveston, Tex.	6	42	15	15	s.	36	Amarillo, Tex.	9	41	5	14	s. 16 w.	33
Palestine, Tex.	9	30	16	10	s. 16 e.	22	<i>Southern Plateau.</i>						
San Antonio, Tex.	7	36	31	8	s. 44 e.	40	El Paso, Tex.	27	5	30	17	n. 30 e.	26
<i>Ohio Valley and Tennessee.</i>							Santa Fe, N. Mex.	10	27	31	12	s. 48 e.	26
Chattanooga, Tenn.	18	23	11	27	s. 73 w.	17	Phoenix, Ariz.	17	8	24	24	n. 10 w.	9
Knoxville, Tenn.	19	14	18	29	s. 73 w.	17	Yuma, Ariz.	10	27	13	27	s. 39 w.	23
Memphis, Tenn.	16	27	12	20	s. 86 w.	14	<i>Middle Plateau.</i>						
Nashville, Tenn.	13	22	12	32	s. 66 w.	23	Carson City, Nev.	16	15	4	38	n. 88 w.	34
Lexington, Ky.	9	31	5	33	s. 51 w.	35	Winnemucca, Nev.	11	22	13	34	n. 62 w.	28
Louisville, Ky.	13	26	18	21	s. 32 w.	15	Salt Lake City, Utah.	17	24	20	16	s. 30 e.	8
Indianapolis, Ind.	23	18	9	27	s. 74 w.	19	<i>Northern Plateau.</i>						
Cincinnati, Ohio.	11	21	12	31	s. 62 w.	10	Baker City, Oreg.	25	28	5	13	s. 69 w.	8
Columbus, Ohio.	15	20	17	24	s. 54 w.	9	Idaho Falls, Idaho.	15	40	4	9	s. 11 w.	26
Pittsburg, Pa.	10	23	14	26	s. 34 w.	23	Spokane, Wash.	6	37	14	19	s. 10 w.	29
Parkersburg, W. Va.	7	33	18	19	s. 2 w.	26	Walla Walla, Wash.	6	34	4	27	s. 89 w.	36
<i>Lower Lake Region.</i>							<i>North Pacific Coast Region.</i>						
Buffalo, N. Y.	10	29	17	24	s. 20 w.	20	Fort Canby, Wash.	37	7	2	24	n. 36 w.	37
Oswego, N. Y.	12	29	20	19	s. 3 e.	17	Port Angeles, Wash. *	10	1	1	25	n. 69 w.	38
Rochester, N. Y.	14	27	18	29	s. 51 w.	21	Seattle, Wash.	23	23	9	18	n. 84 w.	9
Erie, Pa.	12	15	18	23	s. 72 w.	10	Tacoma, Wash.	20	21	2	30	s. 88 w.	28
Cleveland, Ohio.	17	26	15	16	s. 6 w.	9	Tatoosh Island, Wash.	0	46	2	23	s. 25 w.	51
Sandusky, Ohio.	12	24	14	23	s. 37 w.	15	Portland, Oreg.	35	10	7	35	n. 49 w.	38
Toledo, Ohio.	13	17	13	31	s. 77 w.	18	Roseburg, Oreg.	43	2	23	16	n. 9 e.	41
Detroit, Mich.	24	16	20	18	n. 14 e.	8	<i>Middle Pacific Coast Region.</i>						
Alpena, Mich.	23	15	21	18	n. 21 e.	8	Eureka, Cal.	28	15	2	36	n. 69 w.	36
Grand Haven, Mich.	23	11	16	26	n. 40 w.	16	Redbluff, Cal.	31	15	13	17	s. 14 w.	16
Marquette, Mich.	23	18	10	19	n. 42 w.	14	Sacramento, Cal.	17	34	1	25	s. 55 w.	29
Port Huron, Mich.	29	18	15	12	n. 15 e.	11	San Francisco, Cal.	0	21	0	54	s. 68 w.	58
Sault Ste. Marie, Mich.	13	18	15	27	s. 67 w.	13	<i>South Pacific Coast Region.</i>						
Chicago, Ill.	27	16	13	16	n. 16 w.	11	Fresno, Cal.	37	3	2	41	n. 49 w.	59
Milwaukee, Wis.	20	14	22	18	n. 34 e.	7	Los Angeles, Cal.	0	19	12	27	s. 49 w.	20
							San Diego, Cal.	24	14	5	37	n. 78 w.	34
							San Luis Obispo, Cal.	19	19	2	30	w.	28

* From observations at 8 p. m. only. † From observations at 8 a. m. only.

TABLE IX.—*Thunderstorms and auroras, July, 1897.*

States.	No. ^a stations.	Total.																																		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	No. ^b	Days.		
Alabama.....	52	T.	4	6	5	8	5	4	3	3	7	6	3	.....	2	6	2	7	8	4	5	2	.....	2	1	6	2	.....	.....	101	23	T.
Arizona.....	53	T.	2	.....	.....	.....	4	8	3	7	7	.....	1	2	2	3	5	.....	1	5	1	.....	1	5	4	5	2	3	1	71	0	T.
Arkansas.....	61	T.	1	.....	1	3	8	18	7	11	13	1	.....	1	1	3	4	7	10	12	4	.....	8	4	7	1	1	8	1	120	24	T.	
California.....	181	T.	.....	.....	.....	.....	.....	.....	7	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	1	15	4	0	15	0	T.
Colorado.....	75	T.	4	8	3	1	1	2	10	10	1	1	10	1	4	18	13	8	1	1	5	4	11	1	6	7	1	1	4	7	138	28	T.
Connecticut.....	14	T.	7	1	8	2	2	4	4	1	5	8	4	1	3	5	7	1	1	1	1	57	0	T.	
Delaware.....	3	T.	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	13	0	T.			
Dist. of Columbia	4	T.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	A.		
Florida.....	45	T.	3	10	7	3	10	6	7	6	3	9	7	6	2	1	1	3	5	1	2	4	7	9	7	6	7	7	7	7	9	169	30	T.	
Georgia.....	62	T.	2	6	5	7	7	6	1	5	5	3	3	2	1	7	7	4	8	6	7	2	1	2	5	5	2	1	110	26	T.			
Idaho.....	30	T.	5	3	1	.....	2	.....	.....	.....	.....	.....	.....	.....	2	5	5	1	.....	1	2	5	2	1	.....	2	2	.....	39	15	A.	
Illinois.....	92	T.	7	21	3	18	8	1	2	4	15	32	12	6	2	18	8	2	1	4	15	1	13	19	19	6	16	2	245	1	T.			
Indiana.....	54	T.	2	.....	1	8	.....	1	2	11	13	3	1	4	1	1	8	3	4	3	4	1	.....	1	4	4	.....	3	13	96	23	A.
Indian Territory.	7	T.	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	1	2	.....	.....	.....	.....	5	17	9	203	21	5	0	0	A.	
Iowa.....	122	T.	2	10	10	14	4	.....	24	20	7	.....	1	4	.....	3	1	2	17	1	.....	33	13	6	.....	5	1	1	1	95	21	A.
Kansas.....	85	T.	1	3	7	13	1	1	5	7	1	.....	1	3	7	6	3	.....	1	2	12	8	2	4	7	1	1	1	1	95	21	A.		
Kentucky.....	52	T.	6	10	3	3	10	2	2	9	11	5	1	2	5	7	3	8	2	3	1	1	10	5	3	1	1	1	1	115	25	T.				
Louisiana.....	50	T.	4	4	6	6	4	6	6	6	9	9	2	.....	1	5	6	6	6	7	7	2	2	1	.....	7	2	1	114	0	A.			
Maine.....	14	T.	1	1	1	2	1	5	1	2	2	4	1	2	7	30	13	2	1	1	1	1	1	0	0	A.			
Maryland.....	35	T.	2	3	1	2	2	15	.....	1	10	10	2	6	.....	9	8	10	6	4	1	11	5	1	4	4	1	1	10	123	24	A.		
Massachusetts....	24	T.	5	.....	.....	1	.....	.....	1	.....	.....	.....	.....	1	3	.....	2	2	7	.....	8	2	5	3	2	1	1	1	34	5	A.	
Michigan.....	112	T.	3	5	2	6	6	4	6	6	6	9	9	2	.....	1	5	6	6	6	7	7	2	2	1	.....	1	10	2	136	26	T.		
Minnesota.....	69	T.	7	19	10	5	16	20	16	5	12	2	8	1	10	.....	5	4	13	2	2	18	3	12	5	8	14	10	15	236	26	A.			
Mississippi.....	46	T.	2	1	6	9	8	7	7	12	11	10	2	.....	2	3	10	8	6	6	3	1	1	5	4	.....	124	23	T.					
Missouri.....	95	T.	20	8	5	24	4	4	1	16	27	5	1	3	11	4	17	4	7	12	1	4	24	27	2	7	2	1	0	286	26	A.			
Montana.....	37	T.	2	1	1	1	2	2	.....	1	10	10	2	6	.....	9	8	10	6	4	1	11	5	1	4	4	1	1	1	21	2	A.		
Nebraska.....	143	T.	1	8	7	3	3	2	2	17	7	4	.....	1	2	3	2	8	8	1	2	2	1	12	6	1	1	2	1	101	23	A.			
Nevada.....	48	T.	1	.....	.....	.....	.....	.....	1	5	10	8	6	3	1	.....	1	2	5	8	4	2	1	4	3	2	1	1	1	67	0	A.
New Hampshire.....	14	T.	1	.....	.....	8	3	1	.....	5	1	3	1	.....	5	2	1	2	2	3	8	4	1	.....	2	7	57	1	A.			
New Jersey.....	55	T.	17	1	.....	7	7	.....	16	18	2	20	.....	.....	18	7	9	18	1	27	8	12	.....	17	2	5	10	1	223	20	A.	
New Mexico.....	39	T.	1	.....	1	1	3	2	1	2	1	.....	4	4	1	.....	1	4	.....	2	2	1	1	4	.....	2	2	1	36	16	A.	
New York.....	103	T.	7	2	11	14	6	1	2	11	23	9	2	23	1	2	11	16	11	18	6	8	23	1	10	8	1	4	1	9	4	240	29	A.		
North Carolina.....	59	T.	9	8	8	11	4	7	15	15	14	12	11	14	6	3	4	8	7	12	11	9	1	2	8	6	10	8	1	1	1	221	29	A.		
North Dakota.....	46	T.	4	8	5	1	2	5	6	4	.....	1	.....	3	6	6	4	3	.....	2	6	1	4	1	2	1	1	1	1	75	22	A.	
Ohio.....	135	T.	15	8	3	12	45	2	4	8	7	21	42	23	13	19	1	19	27	30	35	20	11	18	10	6	8	16	4	4	3	1	489	31	A.	
Oklahoma.....	23	T.	1	1	1	3	1	1	2	4	1	2	4	12	1	1	1	1	1	1	1	1	1	1	1	17	8	A.			
Oregon.....	62	T.	1	2	1	1	2	2	1	2	1	1	1	1	1	1	1	1	14	0	A.			
Pennsylvania.....	105	T.	14	5	1	10	20	13	3	31	13	17	2	4	14	26	17	18	16	15	24	1	11	5	4	1	11	9	298	26	A.			
Rhode Island.....	5	T.	1	2	2	2	2	2	0	0	0	A.			
South Carolina.....	43	T.	3	6	6	10	2	1	1	6	4	8	7	11	8	10	4	18	10	8	3	6	13	6	1	1	1	1	143	0	A.			
South Dakota.....	44	T.	3	3	4	4	3	2	3	4	.....	.....	1	6	1	2	3	8	5	8	2	1	4	4	2	3	1	1	71	24	A.			
Tennessee.....	65	T.	4	7	3	9	8	9	5	7	13	15	7	3	2	2	6	14	5	8	6	11	6	1	1	8	11	8	1	1	1	180	27	A.		
Texas.....	85	T.	.....	.....	6	6	4	3	7	5	.....	1	.....	5	3	2	1	4	4	2	.....	3	7	5	1	1	1	1	68	0	A.	
Utah.....	41	T.	5	1	.....	.....	1	1	.....	1	1	5	4	7	2	.....	6	6	1	2	.....	1	6	1	1	51	17	A.				
Vermont.....	18	T.	3	.....	2	8	5	3	1	3	4	1	3	.....	5	2	1	6	5	2	8	4	.....	2	2	2	70	20	A.				
Virginia.....	49	T.	7	.....	2	1	7	10	4	2	7	10	3	4	3	.....	8	6	4	.....	2	1	8	2	1	1	1	1	105	23	A.		
Washington.....	50	T.	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	8	2	A.			
West Virginia.....	35	T.	6	2	1	5	6	6	7	4	4	4	8	1	2	2	8	7	8	5	2	3	1	7	2	1	2	1	2	1	97	0	A.			
Wisconsin.....	61	T.	3	8	5	7	4	1	1	1	18	12	16	5	.....	2	5	.....	4	1	1	1</												

TABLE X.—Hourly sunshine as deduced from sunshine recorders, July, 1897.

Stations.	Instrument.	Percentages for each hour of local mean time ending with the respective hour.												Hours of sunshine.				
		A. M.						P. M.						Total.		Personal estimate.		
		5	6	7	8	9	10	11	Noon	1	2	3	4	5	6	7	8	
Albany, N. Y.	T.	86	88	45	64	79	92	89	92	94	94	88	70	59	46	38	48	315.5 465.2 68 41
Atlanta, Ga.	T.	50	41	45	48	47	49	56	62	61	60	47	45	43	35	34	23	208.6 439.7 47 37
Atlantic City, N. J.	P.	71	65	61	63	63	61	66	70	69	67	71	65	63	57	39	34	238.8 453.0 63 46
Baltimore, Md.	T.	26	39	30	39	55	62	61	58	54	53	39	38	33	20	19	21	187.1 453.0 41 44
Binghamton, N. Y.	T.	38	31	34	44	50	57	69	66	68	69	69	64	55	42	33	29	240.5 461.6 52 37
Bismarck, N. Dak.	P.	46	51	50	61	64	66	67	67	69	66	68	57	54	51	47	36	277.1 479.6 58 56
Boston, Mass.	T.	38	43	45	48	45	56	60	58	65	61	58	42	34	24	16	16	219.7 461.8 48 35
Buffalo, N. Y.	T.	37	36	47	59	71	71	83	86	84	85	85	77	69	55	48	36	308.3 465.2 66 55
Charleston, S. C.	T.	57	58	60	64	73	85	83	81	81	75	75	62	49	38	26	27	233.5 437.2 65 51
Chattanooga, Tenn.	T.	38	38	46	54	55	69	65	69	61	57	54	53	53	39	37	34	235.8 442.0 53 46
Cheyenne, Wyo.	P.	67	72	75	75	77	80	83	77	72	65	54	56	57	58	40	38	300.9 458.6 66 56
Chicago, Ill.	T.	21	20	40	51	78	79	79	82	79	77	71	72	68	40	37	32	270.8 461.8 59 59
Cincinnati, Ohio	T.	40	38	38	60	78	85	87	90	90	92	92	94	82	75	65	58	337.8 458.0 75 61
Cleveland, Ohio	T.	25	34	31	48	59	73	73	75	76	71	73	71	71	68	59	55	275.5 461.8 60 52
Columbus, Ohio.	T.	54	55	63	65	75	83	90	98	90	92	92	86	74	70	60	53	344.4 455.2 76 52
Denver, Colo.	P.	76	78	76	73	78	76	86	76	76	75	75	67	63	62	56	47	318.0 455.2 70 50
Des Moines, Iowa	T.	62	68	63	64	68	68	75	78	79	78	78	73	70	65	72	75	336.1 461.8 71 62
Detroit, Mich.	T.	54	56	71	77	80	84	90	87	84	83	83	79	73	78	71	58	349.8 461.8 76 56
Dodge City, Kans.	P.	69	75	85	90	91	88	88	89	87	89	89	87	86	86	85	85	378.2 450.1 84 73
Dubuque, Iowa	T.	62	57	59	67	73	83	85	88	83	76	78	78	69	64	68	68	336.1 461.6 73 69
Eastport, Me.	P.	26	29	32	38	46	52	55	61	54	60	56	58	52	45	40	35	221.5 471.7 47 30
Erie, Pa.	T.	52	48	46	50	63	78	70	73	75	71	63	58	55	52	50	49	278.7 461.8 60 46
Eureka, Cal.	P.	8	14	23	29	41	47	63	71	42	33	33	36	35	32	28	246.4 458.6 58 61	
Fresno, Cal.	T.	84	91	91	98	98	100	100	97	97	96	95	95	96	95	94	96	423.2 447.4 94 91
Galveston, Tex.	P.	46	78	90	93	92	98	95	94	99	99	100	96	96	88	57	75	375.1 427.4 88 70
Harrisburg, Pa.	T.	49	49	53	63	70	75	78	80	77	73	65	60	59	51	39	35	294.6 455.2 63 41
Helena, Mont.	T.	57	64	76	71	89	73	71	73	68	66	68	65	63	63	47	47	316.1 479.6 66 56
Idaho Falls, Idaho	T.	33	35	38	53	75	85	86	85	85	85	85	79	76	61	64	49	305.3 485.2 66 56
Indianapolis, Ind.	T.	61	57	73	88	83	91	90	91	86	94	91	84	82	81	84	88	365.9 455.2 80 58
Kansas City, Mo.	P.	54	55	72	78	78	77	78	84	85	79	78	79	81	77	76	75	346.1 453.0 78 67
Key West, Fla.	T.	94	45	63	71	78	88	85	79	79	86	86	83	79	65	42	33	291.5 419.1 67 40
Little Rock, Ark.	T.	90	79	80	82	84	88	84	86	94	100	93	86	79	66	55	51	368.4 443.0 82 56
Los Angeles, Cal.	T.	8	17	17	34	53	75	85	93	94	96	90	100	99	94	93	93	321.7 439.7 75 65
Louisville, Ky.	T.	76	70	69	68	68	70	78	83	84	89	85	82	82	83	54	59	327.9 450.1 73 49
Minneapolis, Minn.	T.	23	29	35	41	47	54	58	61	66	63	58	50	46	35	35	23	215.5 471.7 46 46
Nashville, Tenn.	T.	68	62	70	71	71	74	79	84	84	80	78	70	62	49	43	24	306.8 444.8 69 55
New Orleans, La.	T.	37	41	52	58	62	56	54	60	52	53	51	50	41	28	15	18	199.0 429.6 46 45
New York, N. Y.	T.	4	11	28	34	53	68	73	71	70	72	70	65	54	42	21	15	227.3 458.6 50 37
Northfield, Vt.	T.	10	22	39	45	51	55	55	50	48	50	53	57	54	46	23	24	207.0 468.4 44 31
Omaha, Nebr.	P.	61	57	63	73	77	80	89	91	90	87	86	85	71	69	59	59	354.9 458.6 77 66
Philadelphia, Pa.	T.	28	29	42	46	59	64	64	73	76	73	69	61	55	57	40	38	248.9 455.2 55 32
Phoenix, Ariz.	P.	71	63	86	85	93	91	89	92	94	97	98	92	84	85	61	55	379.1 437.2 57 39
Pittsburg, Pa.	T.	27	26	27	37	64	71	81	74	81	87	85	87	85	85	89	89	240.1 458.6 52 38
Portland, Me.	T.	0	1	15	31	47	59	67	77	77	73	73	73	73	73	73	73	208.6 468.4 45 31
Portland, Oreg.	T.	48	52	51	55	66	68	73	75	84	88	88	77	70	67	71	73	329.3 475.7 69 66
Portland, Oreg.	P.	48	53	54	55	62	64	63	66	72	77	73	73	73	73	73	73	318.0 475.7 66 66
Raleigh, N. C.	T.	35	36	45	44	48	61	66	70	68	68	64	62	56	54	44	37	319.4 444.3 72 61
Rochester, N. Y.	T.	45	39	45	44	48	61	66	70	68	68	64	62	56	54	38	20	323.0 465.2 53 47
St. Louis, Mo.	T.	71	72	74	78	79	81	85	92	90	90	90	88	86	87	67	63	307.6 458.0 81 60
St. Paul, Minn.	P.	41	50	60	66	66	68	63	68	65	67	73	70	69	58	53	53	293.3 471.7 82 47
Salt Lake City, Utah.	P.	73	73	78	83	85	85	89	87	81	81	87	82	82	82	71	75	275.6 458.6 82 68
San Diego, Cal.	P.	14	9	37	64	81	93	93	99	95	96	98	94	94	92	87	89	329.5 437.2 75 81
San Francisco, Cal.	T.	11	11	45	58	66	82	82	96	99	99	100	100	96	96	98	92	325.6 450.1 74 70
Santa Fe, N. Mex.	P.	58	60	77	81	77	80	81	77	68	66	66	65	57	57	40	28	290.9 444.3 65 56
Savannah, Ga.	P.	33	57	69	81	84	88	80	79	78	74	69	67	59	54	44	40	308.0 434.5 70 48
Seattle, Wash.	T.	82	85	89	47	62	62	72	84	92	87	88	82	82	82	62	53	310.5 488.2 64 59
Spokane, Wash.	T.	45	68	97	73	77	84	85	91	88	88	88	91	93	82	80	56	377.6 488.2 78 55
Tampa, Fla.	T.	.....	68	68	94	62	69	64	68	61	55	54	43	35	35	52	41	253.4 424.9 55 52
Vicksburg, Miss.	T.	67	46	75	61	67	66	71	66	74	73	65	65	58	58	60	51	370.8 434.5 65 55
Washington, D. C.	P.	46	52	55	61	67	66	71	66	74	73	65	65	58	58	51	55	290.9 453.0 62 50
Wilmington, N. C.	T.	50	28	35	55	72	69	65	68	61	58	58	52	52	51	38	29	237.6 439.7 53 43

TABLE XI.—Accumulated amounts of precipitation for each 5 minutes, for storms in which the rate of fall equaled or exceeded 0.25 in any 5 minutes, or 0.75 in 1 hour during July, 1897, at all stations furnished with self-registering gauges.

Station.	Date.	Total duration.		Total amt. [*] of precip.	Excessive rate.		Amount before excessive began.	Depths of precipitation (in inches) during periods of time as indicated.														
		From—	To—		Began—	Ended—		5 min.	10 min.	15 min.	20 min.	25 min.	30 min.	35 min.	40 min.	45 min.	50 min.	60 min.	80 min.	100 min.	120 min.	
Albany, N. Y.	1	2	3	4	5	6	7															
Atlanta, Ga.	18-14	4.30 p.m.	8.01 a.m.	2.34	12.55 a.m.	2.55 a.m.	0.50	0.08	0.07	0.18	0.16	0.19	0.23	0.27	0.32	0.37	0.40	0.45	0.66	0.96	1.20	
Atlanta, Ga.	19	7.33 a.m.	3.45 p.m.	2.21	10.48 a.m.	11.28 a.m.	0.02	0.25	0.02	0.38	1.18	1.58	1.68	1.76								
Atlantic City, N. J.	18-14	1.45 p.m.	1.00 a.m.	2.12	5.25 p.m.	6.15 p.m.	0.60	0.04	0.10	0.15	0.20	0.25	0.33	0.45	0.45	0.63	0.75	0.79				
Do.	23	6.10 p.m.	9.30 p.m.	0.88	7.24 p.m.	7.46 p.m.	T.	0.30	0.46	0.48	0.55	0.67										
Baltimore, Md.	17	12.25 p.m.	5.40 p.m.	1.76	3.28 p.m.	3.48 p.m.	0.38	0.26	0.66	1.05	1.17											
Binghamton, N. Y.	23			0.23																		
Bismarck, N. Dak.	25	4.43 p.m.	5.35 p.m.	0.39	5.00 p.m.	5.25 p.m.	0.04	0.06	0.15	0.21	0.39	0.53										
Boston, Mass.	29	D. N.	10.06 a.m.	1.48	6.27 a.m.	8.37 a.m.	0.16	0.30	0.39	0.45	0.49	0.53	0.62	0.68	0.77	0.78	0.99	1.04	1.13	1.17	1.23	
Buffalo, N. Y.	11	5.05 p.m.	7.45 p.m.	1.88	5.05 p.m.	5.50 p.m.	0.00	0.20	0.45	0.70	0.85	1.00	1.20	1.50	1.57	1.63						
Do.	23	5.47 a.m.	9.10 a.m.	6.67	5.47 a.m.	6.07 a.m.	0.00	0.20	0.42	0.59	0.67											
Chicago, Ill.	4	12.08 p.m.	1.00 p.m.	0.42	12.10 p.m.	12.25 p.m.	T.	0.05	0.20	0.37												
Cincinnati, Ohio.	5	4.20 p.m.	5.58 p.m.	2.20	4.32 p.m.	5.32 p.m.	0.01	0.11	0.31	0.51	0.73	1.05	1.32	1.55	1.67	1.70	1.94	2.10	2.18			
Cleveland, Ohio.	5			0.65																		
Columbus, Ohio.	11	3.55 p.m.	6.04 p.m.	3.81	4.03 p.m.	4.50 p.m.	0.01	0.20	0.28	0.40	0.65	1.05	1.35	1.65	2.00	2.45	2.62	2.79	2.80	2.86	2.93	
Denver, Colo.	9-10			0.78																		
Des Moines, Iowa.	9	3.32 p.m.	8.00 p.m.	0.57	3.92 p.m.	4.00 p.m.	0.00	0.15	0.37	0.40	0.42	0.50	0.63									
Do.	23-24	10.55 p.m.	1.25 a.m.	1.05	10.55 p.m.	11.30 p.m.	0.00	0.11	0.29	0.57	0.79	0.86										
Detroit, Mich.	16			0.29																		
Dodge City, Kans.	19	4.02 p.m.	5.40 p.m.	1.70	4.02 p.m.	4.38 p.m.	0.00	0.10	0.29	0.53	0.73	0.90	1.15	1.47	1.57							
Duluth, Minn.	2-3	12.45 p.m.	8.45 a.m.	4.09	2.35 a.m.	4.69	0.05	0.06	0.23	0.37	0.59	0.75	0.97	1.15	1.30	1.36						1.45†
Do.	9	D. N.	7.35 a.m.	6.69	6.37 a.m.	6.58 a.m.	0.05	0.18	0.25	0.36	0.43	0.47	0.50									
Eastport, Me.	24			0.65																		0.52
Erie, Pa.	26			0.50																		0.44
Galveston, Tex.	27	7.29 p.m.	9.45 p.m.	0.77	7.42 p.m.	8.10 p.m.	0.01	0.20	0.40	0.50	0.58	0.65	0.69									0.46
Harrisburg, Pa.	26-27			1.55																		
Hatteras, N. C.	12-13	9.30 a.m.	5.40 p.m.	5.57	8.00 a.m.	8.50 a.m.	0.00	0.15	0.29	0.40	0.53	0.60	0.72	0.87	0.98	1.12						
Indianapolis, Ind.	11	9.55 a.m.	1.45 p.m.	1.50	12.17 p.m.	12.57 p.m.	0.05	0.10	0.25	0.40	0.54	0.65	0.84	1.00	1.08							
Do.	25	6.10 p.m.	9.10 a.m.	1.50	7.25 p.m.	8.00 p.m.	0.08	0.05	0.10	0.35	0.70	1.05	1.32	1.43								
Jacksonville, Fla.	5			1.85																		0.95
Jupiter, Fla.	9	3.40 a.m.	10.00 a.m.	1.35	5.25 a.m.	5.50 a.m.	0.15	0.05	0.20	0.34	0.52	0.64	0.67	0.69	0.75	0.79	0.90					
Do.	29	5.25 p.m.	6.10 p.m.	0.98	5.25 p.m.	5.50 p.m.	0.00	0.05	0.14	0.43	0.80	0.98	0.96									
Kansas City, Mo.	1	D. N.	9.40 a.m.	1.79	12.45 a.m.	12.55 a.m.	0.08	0.15	0.30	0.34	0.36	0.38	0.43	0.48	0.53	0.54	0.59	0.77	0.98	1.17	1.48	
Key West, Fla.	31	9.08 p.m.	10.15 p.m.	0.88	9.25 p.m.	9.45 p.m.	0.10	0.15	0.43	0.60	0.68	0.89										
Lincoln, Nebr.	9-10	11.20 p.m.	D. N.	0.74	11.25 p.m.	11.45 p.m.	0.04	0.04	0.30	0.47	0.65	0.70										0.83
Little Rock, Ark.	20			0.50																		
Louisville, Ky.	10	12.55 p.m.	8.12 p.m.	1.65	1.15 p.m.	2.00 p.m.	0.04	0.05	0.15	0.20	0.40	0.73	0.97	1.11	1.23	1.31	1.39	1.60				
Do.	11	4.04 p.m.	7.10 p.m.	1.02	5.30 p.m.	5.50 p.m.	0.05	0.20	0.45	0.73	0.81	0.83										
Do.	24	11.40 a.m.	12.45 p.m.	0.92	12.05 p.m.	12.35 p.m.	T.	0.50	0.47	0.52	0.74	0.86	0.90									
Memphis, Tenn.	21	2.45 a.m.	3.10 a.m.	0.47	2.47 a.m.	3.00 a.m.	T.	0.25	0.49	0.46												
Milwaukee, Wis.	10			0.87																		
Montgomery, Ala.	9	4.52 p.m.	6.35 p.m.	0.80	4.54 p.m.	5.47 p.m.	T.	0.13	0.25	0.33	0.34	0.38	0.38	0.42	0.53	0.60	0.68	0.76				
Nantucket, Mass.	29			0.61																		0.50
Nashville, Tenn.	4	6.24 p.m.	9.15 p.m.	1.95	8.20 p.m.	9.00 p.m.	0.20	0.15	0.35	0.57	0.80	1.05	1.37	1.59	1.70							
Do.	10	5.40 p.m.	9.30 p.m.	1.20	5.40 p.m.	6.00 p.m.	0.00	0.17	0.67	0.95	1.02											
Do.	11	6.38 p.m.	7.25 p.m.	1.30	6.40 p.m.	7.20 p.m.	T.	0.10	0.28	0.41	0.72	0.98	1.09	1.18	1.26							
New Orleans, La.	17	12.25 p.m.	1.50 p.m.	1.30	12.36 p.m.	1.20 p.m.	T.	0.20	0.49	0.60	0.78	0.87	1.05	1.19	1.25	1.30						
New York, N. Y.	18	7.55 a.m.	9.20 p.m.	0.98	8.02 a.m.	9.00 a.m.	0.07	0.06	0.11	0.19	0.33	0.53	0.65	0.73	0.77							
Do.	23	3.36 p.m.	7.20 p.m.	0.84	3.50 p.m.	4.25 p.m.	0.05	0.25	0.40	0.53	0.63	0.64	0.68	0.73								
Norfolk, Va.	27	7.00 p.m.	7.30 p.m.	0.79	7.03 p.m.	7.22 p.m.	T.	0.30	0.48	0.70	0.76											
Northfield, Vt.	6	4.35 p.m.	6.20 p.m.	2.05	5.08 p.m.	5.37 p.m.	0.08	0.15	0.39	0.49	0.80	1.15	1.26	1.28	1.38	1.45	1.55					
Oklahoma, Okla.	20	12.01 a.m.	D. N.	1.48	12.05 a.m.	1.05 a.m.	0.03	0.07	0.34	0.47	0.50	0.60	0.78	0.76	0.94	1.03	1.17	1.24				
Omaha, Nebr.	9-10	3.42 p.m.	D. N.	1.05	3.45 p.m.	4.20 p.m.	T.	0.06	0.16	0.30	0.46	0.60	0.65	0.68	0.70							
Parkersburg, W. Va.	17	5.20 a.m.	6.10 a.m.	0.46	5.22 a.m.	5.41 a.m.	0.01	0.08	0.36	0.38	0.44	0.50	0.53	0.57								
Do.	26-27	7.25 p.m.	D. N.	1.10	7.50 p.m.	8.17 p.m.	0.05	0.09	0.11	0.24	0.31	0.47	0.54									
Philadelphia, Pa.	27-28			2.14																		0.45
Pittsburg, Pa.	11	3.00 p.m.	6.00 p.m.	0.83	3.33 p.m.	4.00 p.m.	0.07	0.10	0.19	0.40	0.53	0.60	0.68									
Do.	18	5.55 p.m.	7.25 p.m.	0.76	6.00 p.m.	6.30 p.m.	T.	0.04	0.14	0.29	0.49	0.56	0.60	0.62								
Portland, Me.	22			0.54																		0.31
Portland, Oreg.	5			0.16																		
Raleigh, N. C.	12	4.20 p.m.	9.00 p.m.	1.25	5.40 p.m.	6.25 p.m.	0.01	0.21	0.37	0.49	0.58	0.65	0.78	0.81	0.95							
Rochester, N. Y.	11	3.30 p.m.	9.40 p.m.	3.37	4.05 p.m.	5.15 p.m.	0.03	0.14	0.44	0.71	1.06	1.38	1.70	1.84	1.96	2.13	2.24	2.49	2.74			
St. Louis, Mo.	25	4.40 a.m.	6.25 a.m.	0.64	5.55 a.m.																	

TABLE XII.—*Excessive precipitation, by stations, for July, 1897.*

Stations.	Monthly rainfall 10 inches, or more.	Rainfall 2.50 inches, or more, in 24 hours.		Rainfall of 1 inch, or more, in one hour.	
		Amt.	Day.	Amt.	Time.
<i>Alabama.</i>		<i>Inches.</i>	<i>Inches.</i>	<i>Ins.</i>	<i>h.m.</i>
Birmingham		2.95	19		
Brewton				1.50	1 00
Do				2.35	1 00
Demopolis				1.54	1 30
Greensboro		2.97	19		
Madison		2.50	18-19		
Mobile		2.63	26-27		
Newton	10.49	6.20	2	6.20	2 00
Do				1.49	1 00
Tuscaloosa		3.39	18-19		
Union		4.65	18-19		
Wilsonville				1.06	1 00
<i>Arizona.</i>					
Payson				1.00	1 00
Tucson				1.23	0 30
<i>Arkansas.</i>					
Blanchard Springs				1.86	0 45
Conway				1.50	1 45
Hot Springs (near)		5.25	20		
Jonesboro		2.50	19	2.50	2 00
Marvell				1.30	0 40
Moore		5.60	18-19		
Mosssville				2.14	1 30
Paragould				1.10	0 15
Stuttgart				2.47	2 00
<i>Colorado.</i>					
Hoehne (near)				1.15	0 30
Minneapolis		3.16	17	3.16	1 30
<i>Connecticut.</i>					
Bridgeport	18.77	8.71	12-18		
Canton	16.96	7.98	12-14		
Do		4.14	23		
Do		3.38	28-29		
Colchester	10.82	2.87	12-13		
Do		3.60	23		
Falls Village	10.57	3.47	12-13		
Middletown	13.35	5.09	12-13		
Do		2.90	23		
New Haven	16.63	6.20	12-13		
Do		3.66	23		
Do		3.42	28-29		
Norwalk	10.12	3.20	12-13		
Southington	19.90	10.30	13-14		
Do		2.80	21-23		
Do		3.50	29		
Storrs	12.24	5.15	13-14		
Do		4.02	23		
Windsor	15.29	9.18	12-14		
Do		2.86	28-29		
<i>Delaware.</i>					
Newark		2.50	26-27		
<i>Florida.</i>					
Bartow	14.55	2.64	12		
Do		2.89	21		
Brooksville	11.98	6.01	11-12		
Earnestville	11.38	2.70	13	1.83	1 15
Do				1.11	1 00
Fort Meade	11.81	3.64	12		
Haywood		4.10	21-23		
Macclenny				1.32	1 00
Manatee	11.74	2.50	23		
Myers	14.82	4.20	7	1.16	1 00
New Smyrna		3.95	6	1.06	1 00
Orange Park				1.04	0 25
Orlando		2.90	23	2.90	1 00
Oxford		4.00	12	1.70	1 00
Switzerland		3.78	10		
Tampa		3.25	12-13		
Tarpon Springs	10.55	3.86	11-12		
<i>Georgia.</i>					
Albany		4.21	2	4.21	2 00
Atlanta				1.79	0 45
Augusta		3.83	17	3.87	1 52
Bainbridge				1.07	1 00
Bellville				1.40	1 00
Cartersville		4.21	16		
Cedartown				1.20	1 00
Columbus		2.65	19	2.65	2 00
Eastman				1.05	1 00
Fort Gaines	10.08	2.81	6		
Gainesville	14.43	8.20	17-18	1.37	1 15
Do				1.57	0 45
Do				2.02	1 15
Do				2.25	1 15
Gillsville	10.94	3.60	18		
Greenbush				1.30	1 00
Marietta		3.88	19		
Newman				1.17	1 00
Quitman				1.39	0 50
Ramsey		2.80	19		
Savannah				1.00	0 40
Do				1.38	0 56
Do				1.92	1 00
Union Point		3.54	18		
Westpoint				2.03	0 10
<i>Illinois.</i>					
Carrollton		3.07	23-24		
Chemung				1.26	0 50
Cleme		3.95	25		
Coatsburg		8.00	24		

TABLE XII.—*Excessive precipitation*—Continued.

Stations.	Monthly rainfall 10 inches, or more.	Rainfall 2.50 inches, or more, in 24 hours.		Rainfall of 1 inch, or more, in one hour.	
		Amt.	Day.	Amt.	Time.
<i>Illinois—Continued.</i>					
East Peoria	Inches.	Inches.	10-11	Ins.	h.m.
Havana		2.53			
Now Burnside		3.23	11		
Peoria		2.91	25-26		
Rantoul		2.59	10-11	1.05	1 00
Roundgrove				1.23	0 40
Tuscola		3.72	9-10		10
<i>Indiana.</i>					
Butlerville				1.35	0 30
Columbus		2.94	81		5
Evansville		5.05	1-2		
Greensburg		2.59	20		
Huntington				1.16	1 00
Indianapolis				1.20	1 00
Do.				1.45	1 00
Jeffersonville		4.74	10	4.74	1 45
Knox				1.30	1 00
Marion				2.33	1 00
Mount Vernon				1.95	1 30
<i>Indian Territory.</i>					
South McAlester	Iowa.			1.70	1 00
Ames (near)		8.05	9		
Atlantic				1.26	1 00
Belleplaine		3.18	22		9
Centerville		4.12	25		
Dubuque				2.02	2 00
Grundy Center				1.19	1 10
Guthrie Center		3.91	23		20
Iowa Falls				1.07	1 00
Keokuk		3.62	23-24		
Keosauqua		2.95	23-24		
Lenox				1.08	1 00
Mount Pleasant		3.08	23-24		17
Mount Vernon		4.27	23-24		
Moor		3.25	24		
North McGregor		3.65	10	3.65	2 00
Osage				1.08	0 55
Plover		2.64	3		
Sibley		2.94	20		
Sigourney		2.81	23-24		
Stuart		3.15	9		
Do.		3.36	23		
Washington		4.80	23-24		
Whitten				1.50	1 00
Winterset		2.95	24		9
<i>Kansas.</i>					
Beloit		2.55	9		
Concordia		2.94	9-10		
Dodge City		3.48	10-20	1.64	1 00
Fall River		2.68	18		
Garden City		2.65	9-10		
Grenola		4.00	4		
Independence		3.25	18-19		
Linn		4.00	9-10		
McPherson		4.52	4		
Oswego		2.50	4-5		
Ulysses				1.05	0 30
Wamego		3.23	3-4		
Winona				1.00	0 30
<i>Kentucky.</i>					
Alpha				1.10	0 20
Bardstown				1.50	1 20
Do.				1.24	1 00
Do.				1.35	1 00
Caddo		2.60	25-26		
Edmonton		2.50	24		
Henderson		4.80	1-2		
Lexington				1.41	0 50
Loretto				2.39	1 30
Louisville				1.39	1 00
Marrowbone		3.02	2	3.02	3 00
Maysville		2.60	26		
Mount Vernon		2.60	24		
Mount Sterling				1.74	1 30
Scott				2.31	1 15
Williamsburg	Louisiana.	2.75	19		
<i>Maine.</i>					
Amite		2.70	11-12		
Do.		2.55	22		
Baton Rouge		2.70	24		
Hammond				1.57	1 00
Montgomery				1.00	1 00
Do.				1.10	1 00
New Orleans				1.32	1 00
Oxford				1.44	0 81
Do.				1.12	0 25
Cornish	Maine.	3.05	18		
Fort Fairfield		4.15	12-18		
North Bridgton		18.25	12-13		
<i>Maryland.</i>					
Baltimore				1.36	0 23
Chestertown		2.51	26		
Fallston		3.25	26-27		
Frederick		2.52	26-27		
Jewell		19.90	14.75		
New Market			2.85	12	
Princess Anne		11.88		2.05	1 00
Solomona				1.17	0 50

TABLE XII.—*Excessive precipitation—Continued.*

Stations.	Monthly rainfall 10 inches, or more.	Rainfall 2.50 inches, or more, in 24 hours.		Rainfall of 1 inch, or more, in one hour.		
		Amt.	Day.	Amt.	Time.	Day.
<i>Massachusetts.</i>						
Amherst	13.87	5.54	12-13	1.04	1 00	23
Boston		3.60				
Hyannis		6.55	12-13	1.15	1 05	7
Springfield Armory	14.99	8.44	28-29			
Do.		8.32	29			
Vineyard Haven						
<i>Michigan.</i>						
Bay City	10.10	5.13	12-13			
Benzonia		4.00	25-26			
Howell		3.35	26			
Jeddo		4.26	26-27			
Lansing		4.10	26			
Newberry						
Olivet		3.07	26			
Ovid		3.00	13			
Saginaw		3.13	13			
Thomaston		5.32	25-26			
Valley Center		3.80	26			
<i>Minnesota.</i>						
Ada		3.28	20			
Beardsey		2.97	20			
Bermidji		3.00	6			
Bird Island		3.17	7			
Blooming Prairie		3.30	24	3.30	0 40	24
Collegeville		3.47	6			
Crookston		2.60	20			
Duluth		4.20	2-3			
Faribault		2.50	6			
Glencoe		2.94	6-7			
Glenwood		2.85	6	1.53	1 30	31
Grand Meadow		2.88	25			
Lakeside		2.75	6			
Lake Winnibigoshish		4.21	2			
Lambert		2.90	18			
Lesuer	10.80	3.00	6			
Maple Plain				1.25	0 30	9
Milaca		12.81	3.00	2		
Do.		3.60	6			
Montevideo				1.15	1 00	29
Morris		4.23	2-3			
Mount Iron		3.23	8			
Park Rapids	10.16	2.53	3			
Pine River		3.95	2-3			
Pokeyama Falls				1.23	0 45	2
St. Cloud		12.81	4.05	6		
Do.		3.90	24	3.80	2 30	24
St. Paul				1.53	1 00	25
Sandy Lake Dam	13.41	6.52	2-3			
Tower		3.50	6			
Two Harbors		3.80	2			
Wabasha		3.44	31			
Worthington	2.58	20-21				
<i>Mississippi.</i>						
Austin				2.40	2 00	7
Columbus		6.60	17			
Greenville				1.19	0 30	7
Jackson				1.88	0 55	13
Lake		4.40	12-13	2.00	2 00	12
Logtown				1.88	1 00	10
Macon				1.19	1 00	9
Magnolia				1.44	0 45	27
Rosedale		8.21	18			
Vicksburg				1.70	1 00	10
Do.				1.31	1 00	18
Water Valley		3.12	18	1.53	0 50	20
Waynesboro						
Windham				1.20	1 00	20
<i>Missouri.</i>						
Conception				1.38	0 45	25
Farmersville		3.96	4-5			
Fulton		4.05	24-25			
Hannibal		3.81	4-5			
McCune		2.75	10			
Do.		2.83	25			
Mexico		3.63	24-25			
<i>Montana.</i>						
Fort Custer				1.20	0 47	9
Nebraska.						
Auburn				1.95	1 00	9
Bassett		2.56	9			
Beatrice		3.10	9			
Burchard		3.75	10			
Camp Clark		3.15	18			
Chester		4.01	10			
Eden		2.77	10			
Fairbury		3.69	9-10			
Filley		3.75	9			
Hastings				1.17	0 50	9
Hickman		4.17	9			
Kennedy		2.79	19			
Kimball		4.70	18			
Odell		3.06	9			
Springfield		3.26	9-10			
Wilber		4.53	8-9			
<i>New Hampshire.</i>						
Concord		4.82	18			
Durham		3.56	12-13			
Grafton		2.70	12-13			
Keene		3.80	13			

TABLE XII.—*Excessive precipitation—Continued.*

Stations.	Monthly rainfall 10 inches, or more.	Rainfall 2.50 inches, or more, in 24 hours.		Rainfall of 1 inch, or more, in one hour.		
		Amt.	Day.	Amt.	Time.	Day.
<i>New Hampshire—Continued.</i>						
Lancaster		3.00				
Peterboro		4.60				
Sanbornton		3.44				
Stratford		2.65				
Do.		4.24				
Warner		3.92				
<i>New Jersey.</i>						
Asbury Park		2.56				
Atlantic City		3.76				
Barnegat		10.08				
Bayonne		16.96				
Beachhaven		3.80				
Belvidere		10.92				
Beverly		11.11				
Billingsport		4.02				
Blairstown		3.42				
Boonton		11.68				
Bridgeport		11.93				
Cape May C. H.		13.84				
Charlotteburg		12.90				
Do.		13.88				
Chester		3.80				
Do.		2.75				
Clayton		12.22				
College Farm		13.84				
Davis		13.27				
Do.		4.11				
Egg Harbor City		10.23				
Elizabeth		20.80				
Do.		3.67				
Englewood		17.87				
Do.		3.77				
Freehold		13.60				
Gillette		10.48				
Hammonton		13.19				
Hightstown		10.18				
Imlaystown		10.53				
Lambertville		11.35				
Moorestown		19.09				
Newark		13.28				
New Brunswick		10.87				
Newton		3.70				
Ocean City		12.88				
Oceanic		3.18				
Do.		2.78				
Paterson		3.05				
Perth Amboy		16.16				
Do.		4.46				
Plainfield		13.92				
Rancocas		12.31				
Roseland		11.51				
Sergeantsville		2.57				
Somerset		11.08				
South Orange		15.80				
Do.		3.48				
Staffordsville		12.12				
Do.		3.63				
Toms River		12.03				
Vineland		12.56				
<i>New York.</i>						
Albany		8.12				
Appleton		2.60				
Arcade		2.07				
Bedford		11.43				
Brentwood		10.00				
Brooklyn		11.06				
Buffalo						
Carmel		16.64				
Do.		5.08				
Catskill		3.38				
Do.		2.35				
Elizabethtown		18.00				
Fort Niagara		5.25				
Glen Falls		2.50				
Honeymead Brook		2.58				
Humphrey		14.55				
Lake George		2.90				
Middletown		2.57				
Mohonk Lake		14.71				
Do.		3.33				
New York		2.80				
Primrose		2.56				
Rochester		11.12				
Setauket		18.18				
Do.		8.60				
Wappingers Falls		11.84				
Westfield		3.61				
Westpoint		13.05				
Willets Point		6.80				
<i>North Carolina.</i>						
Charlotte						
Fair Bluff		3.07				
Fayetteville		11.11				
Do.		3.56				
Greenville		2.97				
Hatteras		2.50				
Kittiwake		5.57				
Lumberton		3.35				
Murphy		10.39				

TABLE XII.—*Excessive precipitation*—Continued.

Stations.	Monthly rainfall 10 inches, or more.	Rainfall 2.50 inches, or more, in 24 hours.		Rainfall of 1 inch, or more, in one hour.	
		Amt.	Day.	Amt.	Time.
<i>North Carolina—Continued.</i>					
Pantego	Inches.	Inches.	Inches.	h.m.	
Pittsboro	8.25	19-20	1.05	1 00	22
Salisbury	2.80	19-20			
Selma	2.60	12-18			
Do.	2.65	19-20			
Southern Pines	3.18	20			
Tarboro	3.00	7-8			
Waynesville			1.17	1 10	8
Willeyton			1.20	1 00	7
Wilmington	2.60	25	2.25	1 00	25
<i>North Dakota.</i>					
Amenia	5.13	19-20			
Bordulac	2.60	21			
Devils Lake	3.20	21			
Fargo	2.80	20			
Gallatin	2.70	20			
Hamilton	4.43	20			
Langdon	3.47	21			
Mayville	3.28	20-21			
Milton	4.60	21			
Minto	3.77	20			
Minnewaukon	3.17	21			
Power	6.55	19-20			
Sheyenne	3.20	20-21			
University	8.85	19-20			
Wildrice	5.86	19-20			
<i>Ohio.</i>					
Ashtabula	10.69	4-6			
Do.	4.48	18			
Rement	4.12	20-21			
Cambridge			1.14	1 05	18
Canfield	10.55	5.40	21-22		
Cincinnati			1.99	1 00	5
Colebrook	2.64	22	2.64	1 30	22
Columbus	8.81	11	2.68	0 56	11
Fayetteville	10.42	8.63	5	3.00	1 30
Do.	3.71	24			
Greenville			1.75	1 00	5
Hudson			1.30	1 00	
Leipsic	2.55	10	2.55	1 10	10
Lordstown	4.90	11	4.00*	2 00*	11
Milligan	2.75	6	2.75	2 00	6
New Moscow	3.40	26			
Norwalk	2.67	20			
Philo	3.59	11-12			
Plattsburg	3.55	21			
Sandusky			1.80	1 00	5
Toledo			1.10	1 00	18
Vermillion			1.40	1 00	26
Vickery			1.22	0 45	19
Waynesville			1.22	1 00	11
Westerville	2.66	5	2.66	2 00	5
Zanesville	2.99	11-12			
<i>Oklahoma.</i>					
Beaver	3.28	19-20	2.57	0 38	19
Do.			1.25	1 00	24
Oklahoma			1.24	1 00	24
<i>Pennsylvania.</i>					
Brookville	5.20	21			
Elwood Junction	10.94	2.81	22		
Forks of Neshaminy	12.42	3.38	21-22		
Hamburg		2.60	18		
Kennett Square	10.16	3.28	22	1.03	0 55
Do.	2.65	20-27			
Philadelphia (V. O.)	10.25				
Point Pleasant	2.99		18		
Pottstown	2.80		27		
Reading	2.51		27		
Saegerstown	14.51	3.05	11	8.05	2 00
Do.	5.81	17-18			
Shawmont	11.45	4.96	21-22		
Do.	8.39	27-28			
Shinglehouse			1.14	0 45	20
Smiths Corners	10.23	3.89	18		
Swarthmore	10.43				
Swiftwater	13.10	4.50	21	4.00	3 45
Wellboro			1.00	0 40	21
West Chester	3.24	22			
<i>South Carolina.</i>					
Allendale			1.92	1 00	12

TABLE XII.—*Excessive precipitation*—Continued.

Stations.	Monthly rainfall 10 inches, or more.	Rainfall 2.50 inches, or more, in 24 hours.		Rainfall of 1 inch, or more, in one hour.	
		Amt.	Day.	Amt.	Time.
<i>South Carolina—Continued.</i>					
Batesburg	Inches.	Inches.	Inch.	h. m.	
Charleston	2.75	18	1.15	0 50	18
Do	3.29	26-27	1.02	0 30	10
Do			1.10	0 45	25
Cheraw			1.54	1 00	27
Florence			2.10	1 10	9
Gillisonville			1.88	0 45	9
Greenville			1.13	0 45	1
Pinopolis	2.65	11-12			
St. Georges	2.72	4			
Do	2.50	12	2.50	1 50	12
St. Matthews			1.30	1 00	13
St. Stephens			1.48	1 20	27
Do	5.15	26-27	1.22	1 00	22
Yorkville	2.51	4	3.58	3 00	27
<i>South Dakota.</i>					
Castlewood		8.15	19-20		
Howard				1.30	1 00
Pierre		3.89	18-19		
Sioux Falls		2.74	19-20		
Watertown		3.45	19-20		
<i>Tennessee.</i>					
Arlington		3.00	11		
Carthage		3.45	15-18		
Erasmus	10.64	8.07	15-16		
Do		3.87	24-25		
Fairmount		2.71	16		
Do	2.75	34-35			
Grace				1.20	0 40
Do				1.00	1 00
Do				2.06	1 50
Harriman	10.10	3.89	24-25		
Lynnville		2.58	6	2.52	2 00
Nashville				1.88	1 00
Do				1.08	1 00
Do				1.80	0 47
Do				1.04	1 00
New Market		2.70	16	2.21	1 00
Oak Hill	13.21	3.80	24		
Palmetto				2.05	1 30
Rugby		2.75	15-16		
Tellico Plains		2.52	25		
Tracy City		3.20	16		
Tullahoma				1.15	1 00
<i>Texas.</i>					25
Ballinger				1.42	0 45
Forestburg		3.00	17	3.00	1 00
Gainesville		3.55	17	2.40	1 30
Rheinland		2.77	16		
Sulphur Springs				2.08	2 00
Tyler				1.16	1 00
<i>Vermont.</i>					17
Brattleboro	12.09				
Burlington		3.57	18-14		
Chelsea	10.60	3.72	6	3.73	1 30
Cornwall		2.61	18-14		
Enosburg Falls	12.73	4.06	14		
Do		2.91	24		
Jacksonville	10.31	3.04	14		
Northfield				1.67	1 00
Vernon	13.65	2.89	28		
Wells	10.07	2.95	14		
<i>Virginia.</i>					6
Ashland				1.56	0 80
Farmville		3.25	20		
Goshen		2.50	21	2.00	0 30
Lynchburg		2.73	21	2.15	0 50
Do				1.43	0 25
<i>Wisconsin.</i>					
Barron				2.15	1 00
Butternut	15.11	10.15	24-25		
Harvey				1.98	1 20
Medford		2.50	26		
Portage				1.15	1 00
Prairie du Chien		3.89	10	3.89	1 45
Spooner				1.00	1 00

*Estimated